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ORIGINAL LECTURES.

TREMOR.

A Clinical Lecture delivered at the Pacific Medical College, San Francisco.

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(Specially reported for THE MEDICAL NEWS.)

WE have before us, Gentlemen, a patient who presents a peculiar tremor for our consideration. Besides a purulent gingivitis, nothing abnormal is to be found. There is no other disturbance of motility and no alteration of sensibility. In a word we have to do with gingivitis and tremor. If we examine more closely into the character of this tremor we find it involving all four extremities. We see the parts quiet under ordinary circumstances, but a tremulous movement as soon as an effort is made. When the patient stands with his eyes closed he does not totter, but his legs tremble in the same manner as did his hands when he extended them. Tendon reflex is normal. Our patient informs us that for a year and a half he has labored over the furnace of a quicksilver mine, and that three months ago the tremor, and with it salivation, set in. Since this time both have increased in severity. We have before us a case of mercurial intoxication.

If we inquire into the diseased conditions attended with tremor, we will find the latter present in the following pathological states: paralysis agitans, disseminated sclerosis, alcoholism, syphilis, chronic intoxications, and neurasthenia.

Tremor may be produced either by alternate contraction and relaxation of antagonistic muscles, or it may be brought about by irregular innervation of the muscles involved. Under normal circumstances the contraction of a muscle is not a simple single contraction. It is not due to a single impulse from the nerve centre. Waves of nerve force pass during the entire duration of the contraction from that centre to the muscle. It takes a certain measurable time for a muscle to pass from a state of contraction to that of relaxation. If the nervous impulses pass from the centre to the muscle so frequently that the relaxation following the contraction caused by the previous impulse has had no time to pass off before the succeeding impulse arrives, an apparently continuous contraction of the muscle is the result. If, however, the waves of nerve impulse do not pass to the muscle in such rapidity, if a relaxation of the muscle has already been produced before the succeeding wave arrives, no continuous contraction occurs but a tremor.

In the animal body we may for the sake of simplicity consider that the nerve force travels from the centre in the brain to the ganglia of the cord, and thence through the motor nerves to the muscle. For the purpose of illustration we may consider the nervous power to be a fluid, the nervous fibres tubes conveying this fluid, and the ganglionic cell cups in a state of unstable equilibrium so arranged that when this equilibrium is overcome the fluid passes through the tube forming the motor fibres to the muscle. I have said the ganglionic cells are in a state of unstable equilibrium, for you know that a certain amount of nerve force is necessary to produce their activity. If less than this amount be communicated to them, nothing results. Now, we imagine this cup in a state of equilibrium which may be more or less stable; that is to say, the ganglionic cell is more or less irritable. Under ordinary circumstances, the nervous fluid passes from the brain through the nervous tubes and flows into the ganglionic cups. As soon as sufficient has accumulated to overcome the equilibrium, a discharge of the fluid into the motor nerve-tube occurs, and a flow of nervous fluid to the muscle, producing a contraction thereof. While this passage from the ganglionic cell to the muscle is going on, a flow from the brain to the ganglionic cell occurs, which again overcomes its equilibrium, and so before the muscle has had time to pass from its state of contraction to relaxation another wave has come. And so a continuous contraction results.

Now, under pathological conditions, the state of equilibration of the ganglionic cups may be altered. The cup may be balanced nearer its centre of gravity, and so require a larger quantity of nerve fluid to produce a discharge (the cell is less irritable), or it may be balanced further from its centre of gravity (the cell be more irritable). If we imagine the irritability of our cell to be diminished, or, to translate into the terms of our illustration, the equilibration of our ganglionic cups to be made more stable, then it will require the accumulation of a greater amount of nervous fluid to cause its discharge, and if all the other conditions remain the same it must take longer for the cup to be filled to its point of discharge, and therefore the number of discharges in a given time be diminished. Hence, the waves would pass so unfrequently to the muscle that it had time to pass to a condition of relaxation before each succeeding wave arrives, and hence a tremor would result.

Or the nerve-tube through which the nervous fluid passes may be narrowed, so that in a given time a less quantity of fluid can pass to the ganglionic cup, so that likewise the number of discharges in a given time would become reduced. In medical parlance a diminished conductivity of the nervous fibre might cause tremor. Or the muscle itself might be less irritable, so that it would require a greater quantity of nerve force to produce a contraction, and again tremor would result.

It is probable that one other factor is of great importance in the production of tremor, namely, the quantity of nervous fluid which passes from the brain in a given time. It is probable that, in the condition of neurasthenia, that is, nerve exhaustion, less nervous force is generated than under normal conditions. This is however, as yet, a dark, unexplored field. To sum up that which has preceded. we may state tremor may be caused:

1. By exhaustion of nervous centres in the brain.
2. By diminished conductivity of nerve fibres.
3. By diminished irritability of motor ganglionic cells.
4. By diminished muscular irritability. It may be likewise produced by the alternate contraction of antagonistic muscles which occurs in chill. We would add then:
5. Contraction and relaxation of antagonistic muscles.

We are, as yet, too little familiar with the *molecular* changes produced in the nervous system by various pathological lesions to state definitively to which of these five causes the tremor in the individual case be

due, but through this classification a direction may be given to further investigations.

Where we have a tremor independent of voluntary effort, as in paralysis agitans, we must assume that there is a continuous flow of nerve force to the muscle, but not sufficiently rapid to cause continuous contraction, as is the case in tetanus; but, instead, a tremor. We have as yet been baffled in our search for the cause of paralysis agitans, and so the attempt at explanation of the origin of its symptoms is futile.

ORIGINAL ARTICLES.

SPONGE GRAFTING.

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SINCE the publication of Hamilton's paper with the above title in the November number of the *Edinburgh Medical Journal* for 1881—proving not only the innocuousness of properly prepared sponge on living tissue, in common with other properly treated animal substances, and also demonstrating its usefulness in pathological conditions—surgeons on both continents have experimented with varying success according to his method. Having had my attention turned to this line of surgical therapeutics even before seeing his article on the subject, I was stimulated by his success as well as that of one or two followers, whose results have since appeared, to a systematic trial of the method I had already determined upon. I do not accept Dr. Hamilton's theory of granulation, viz., that "the bloodvessels have a constant tendency to be forced outwards into loops, but in the normal condition are restrained by compression from the fasciæ and skin;" when, however, by a solution of continuity of these tissues the vessels are relieved of their pressure, "the action of the heart forces them outward into loops, and they are covered by cells produced by multiplication of connective tissue corpuscles from over-nutrition." While retaining the common idea that the capillary loops are new formations from the underlying bloodvessel, his theory of support afforded by the sponge to these capillaries, and the largely additional facility furnished by the protection of the sponge meshes for the generation of fibro-cellular tissue from the mucoid covering of the blood-tracts, accorded entirely with my former reasoning. Much encouraged, therefore, I set about experimenting with *small bits of sponge as grafts on ulcers.*

I selected fine surgical sponges, had them thoroughly beaten, in order to remove the sand and loose calcareous particles, carefully washed in cold water, and then soaked in dilute hydrochloric acid (officinal acidum muriaticum dilutum, about proper strength) for forty-eight hours; after this, carefully washed in several relays of cold water, in order to remove the acid entirely; and lastly, put into a well-stoppered jar filled with five per cent. solution of carbolic acid. They must remain in the five per cent. solution for at least a week, and are then ready for use. In grafting, the ulcer is carefully disinfected with a two per cent. solution of carbolic acid, taking care not to rupture any capillary, for I have found that hemorrhage into the bits of sponge seems to prevent their absorption. Hands, instruments, and everything likely to come near the ulcer, must also be carefully disinfected. As many pieces of sponge as are desired are now snipped off and allowed to fall into a basin of two per cent. solution of carbolic acid. With a pair of forceps these are successively removed and carefully laid among the granulations; when they are all applied the ulcer is covered with a piece of "protective," and a full Lister dressing applied. The size of the pieces used is about one-tenth of an inch—about the size of an ordinary skin graft. The dressings are generally removed on the third day, reapplied, and the subsequent dressings made, as the case requires. Strict antiseptic precautions should be kept up for a week at least. On the third day I have always found (with one exception which will be mentioned further on) that all the grafts are firmly adherent. If examined carefully at this time with the unaided eye, it will be noticed that each graft is surrounded by a faint white zone, which by a magnifying glass is resolved into radiating bands of lymph inclosing minute bloodvessels which run into the sponge. If now a piece be removed, it will be found pretty firmly fixed, and its removal will be followed by quite an appreciable hemorrhage. Examined microscopically at this time, the interstices of the graft are seen to be pierced in every direction by a network of capillaries, and a number of large nucleated cells permeate its whole substance. After seven days the bits of sponge are seen as small white points in the granulations, entirely covered by lymph and firmly embedded in the granulations. At this time it is difficult to remove them. If a piece be removed, the circumference will be seen to be very ragged, the piece itself seeming to be diminished in size. Examined microscopically the capillaries and large nucleated cells fill the sponge everywhere and the proper sponge substance is beginning to disintegrate. From this time they are steadily absorbed. In fourteen days they are usually not to be seen, or only indistinctly under the granulations. While it is the rule for all the grafts to be absorbed, it has several times occurred that after hemorrhage into them, either from placing them too roughly upon the granulating surface or by attempts at the removal of one of them, after skin had formed over them, a circumscribed ulcer would form at the site, which would close immediately after the removal of the bit of unabsorbed sponge. The explanation of this doubtless is that the extravasated blood, coagulating within the meshes of the sponge, prevents vascular and cellular infiltration of the piece, the *sine qua non* of its absorption and desired encouragement to cicatrization. Of course impurities of any kind would have a much worse effect, hence great care should be observed in preparing and placing the grafts.

So far I have grafted seven cases. Not selected for any particularly favorable feature in the ulcers, but all average, indolent ulcers, resulting from severe injuries and arrived at that state of chronicity where nature seems to wait in patient expectation of the surgeon, by art, rejuvenating tissues

she has worn old and callous in her attempts at repair.

As the largest ulcer grafted and as affording the most typical illustration of the action of sponge grafting in small bits, I will give the fifth case in my order of grafting somewhat in detail, and take it *first* in my present report. I shall then give the others briefly with only the main points noted.

CASE I.—Ulcer of the antero-internal aspect of the thigh resulting from a very severe lacerato-contused wound of the thigh and abdomen. This ulcer was grafted first July 30th, at which time it measured 10x6½ inches. Ten grafts were applied ¾ inch from the margin of the ulcer. They were applied only on the sides, not at the ends or in the centre. August 2d, dressing removed for the first time. All the grafts firmly adherent. The lymph-tracts and bloodvessels distinctly seen entering the sponge-bits on every side. The raised hard edges of the ulcer disappeared, and on both sides, the whole extent, a flat faint blue edge sending numerous little capes into the sea of granulation. The ulcer measures 10x4½ inches. August 10th, ulcer measures 10x3 inches, most of the grafts already covered by skin, the others entirely embedded in the granulations. August 12th, ulcer measures 9½x3 inches, regrafted with 12 grafts placed as before. August 15th, first dressing after last grafting, ulcer measures 9½x2¾ inches. August 18th, measures 9½x2½ inches. August 22d, measures 9½x2¼ inches. Since July 30th (3 weeks) the ulcer had contracted ½ inch length-wise and 4¼ inches laterally. It will be observed that at both graftings, the grafts were placed on the sides of the ulcer and the contraction or cicatrization of the ulcer had been principally lateral. At this time, August 22d, again grafted, using 16 pieces, placing some at either end, and in the centre as well as on the sides. August 25th, first dressing, ulcer measured 9x2¼ inches. September 1st, only 10 pieces of sponge can be located; two distinct islands of skin beginning. A fourth grafting was done September 8th. October 8th, patient discharged with an ulcer ½x4 inches, to be treated in out-door department. At present time, October 25th, ulcer about entirely cicatrized.

CASE II.—Very indolent ulcer after lacerated wound of ulnar side of the wrist and hand, involving in the hand all the tissues of the hypothenar eminence down to the periosteum of the metacarpal bone of the little finger. Ulcer at time of grafting, May 21st, measured 3½x2½ inches: all "took." Patient discharged, July 11th, cured.

CASE III.—Ulcer of the dorsum of the foot, after severe lacerato-contused wound of the toes and foot, also very chronic. June 1, measured 3x3 inches, 8 grafts, all took. Discharged July 29th, cured.

CASE IV.—Large ulcer of the postero-internal aspect of the thigh, subsequent upon severe contused wound. June 1st, measured 4x2 inches; 12 grafts, 4 of these were pulled off by very careless dressing on the third day afterward, but the copious hemorrhage and the depressions left in the surface of the granulations showed that they were firmly attached. Eight remained. June 11th, ulcer measured 3x1 inches. Regrafted, 10 grafts used. Discharged June 29th, with an ulcer measuring ¾x½ inch perhaps. Attended the out-door department and in two weeks entirely cured.

CASE V.—A very irregular ulcer, reaching from malleolus to malleolus posteriorly and upwards to about middle of the lower third of the leg on either side; also downwards to plantar margin of the heel, resulting from severe burn. This grafted twice. First, May 29th, 22 grafts; and second, June 10th, 18 grafts. All took. June 30th, ulcer entirely healed. At this time however, a retrograde action began, and in a week the cicatrix had broken down into a characteristically specific ulcer. The points of skin formed over the sponge grafts were the last to yield, and their sites the first to begin healthy reaction under specific treatment.

CASE VI.—Very similar to fifth. Very irregular ulcer of sole, heel, and posterior surface of ankle, extending to middle of the lower third of the leg. Grafted twice, first, August 11th, 20 grafts; second, August 31st, 28 grafts applied; all took at both graftings. At present, October 25th, notwithstanding various injuries to granulations in attempts at moving the foot and walking, patient is doing well, and will be discharged in a few days.

CASE VII.—A very indolent ulcer over the posterior surface of the elbow-joint, after severe laceration of the elbow-joint and posterior surface of the arm. Measured, August 31th, 3½x3 inches. Applied 10 grafts, all took. October 18, ulcer healed.

The *modus operandi* of sponge grafting appears threefold. First. The grafts afford support and lodgement for the new bloodvessels forming the granulations. Second. They encourage by direct protection, and a stimulation difficult to understand, the genesis of the large nucleated cells and so-called "lymph bands" into distinct centres of cicatrization. Third. Their chief action is to stimulate to a remarkable degree the activity of the marginal cicatrization.

The first proposition seems obvious and requires no enlargement.

The second requires for a proper appreciation a cursory glance at the by-laws—so to speak—of cicatrization. Granulations are loops of new formed bloodvessels with coverings of mucoid or embryonic tissues and a few intercellular fibrillæ. From the bloodvessels there is a constant emigration of white blood corpuscles, also a rapid endogenous multiplication of the mucoid cells; to this activity and the marginal contractions must every ulcer owe its final integrity. Unprotected, under ordinary circumstances, a large number of these cells die and are swept away as pus from the surface of the ulcer; if, however, a porous animal substance, rendered perfectly unirritating, be interposed, it will furnish lodgement, in the aggregate, for a large number of the cells and protect them—while being itself absorbed—during their higher development. This office I believe the sponge grafts to perform. Small bits are preferable on the flat surface of an ulcer to one large piece cut to cover the whole area of the sore, because the large piece is much longer of absorption, is difficult to fit and be retained immov-

ably in place until firmly adherent, and because in many instances where an ulcer is so irritable that it will not submit to a *large* piece of—*in itself*—unirritating animal substance without rebellion, very small pieces of the same disseminated over its surface are retained and readily absorbed. It is rare, moreover, to find an indolent ulcer of large extent with "healthy granulations" over its entire surface; by using small bits of sponge it is possible to take advantage of what favorable area there may be, and thus encourage cicatrization in a part while waiting for the rest to get into proper condition. The stimulation by central cicatrization is difficult of explanation. I hold the orthodox principle of "like generating like" in nature. I cannot contend, therefore, that a bit of the skeleton of a protozoan would proliferate into epithelial cells, nor would I dare insinuate that the mucoid tissue and neophytes grounded upon, and proceeding from the fibroid group of connective tissue would develop into squamous epithelium. Still I must assert from direct and repeated observation, that I have seen cicatrization beginning around and over a sponge graft isolated entirely from everything but granulations—these granulations having originated from a basis substance entirely destitute of epithelium. So far I have not been able to explain this phenomenon clearly, and must leave it for further investigation.

The third and last is a very marked feature in sponge grafting. One of the very first effects observed in the ulcer is the renewed activity of its edges. I have repeatedly noted a contraction of ½ inch on the third day after grafting. This is probably due to the stimulation of the largely increased number of capillaries formed in the ulcer by the assistance of the sponge supports, and the supernutrition thus insured, epithelial proliferations keeping pace with mucoid. Reverdin noted as one of the chief benefits of skin grafting, the stimulating action it exercised on the margin of the ulcer, one which every surgeon since his time has awaited anxiously as the sure harbinger of rapid cicatrization. This effect is observed usually *after* the skin islands have formed in the skin graft method, whereas in sponge grafting it appears almost immediately, and once started it never ceases until the ulcer is healed.

The ulcers noted in this paper were all results of deep wounds and not only such as are ordinarily very slow and tedious in healing, but are commonly followed by serious contractions. Yet in no case has there, so far, resulted any notable distortion. The cicatrices were firm, but aside from slight depressions after the deep wounds, no deformity has occurred, though all the ulcers were on extremities. The two, of the hand and foot respectively (Cases II. and III.) left not only no contraction, but also no interference with motion.

A comparison of the two methods results in the following conclusions, to wit:

1st. Sponge grafts are available when skin cannot be obtained. They cause no pain in preparing them, nor any annoying little wounds as additional tax on the healing powers of the patient. They do not subject the recipient patient to the danger of inoculation of specific diseases—as skin may do when taken from a cachectic donor.

2d. Sponge grafts take more surely; invariably, when proper care is exercised.

3d. Sponge grafts stimulate marginal activity much earlier and to a much greater degree than skin.

4th. In sponge grafting skin or cicatricial islets are much slower of formation, and not as sure as after skin grafting.

5th. Healing seems equally, if not more rapid with sponge grafts than with skin.

6th. Resulting cicatrices are equally good and contractions equally prevented.

POISONING BY TEN GRAINS SULPHATE OF MORPHIA TREATED BY SULPHATE OF ATROPIA; RECOVERY.

BY E. STUVER, B.Sc., M.D.
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MRS. B., æt. 21 years, married two years, has had one child which was delivered piecemeal, and is now about six or seven months advanced in her second pregnancy. She is of a melancholic temperament, and twice previously took opium with a suicidal intent—once during her former pregnancy. Has not been enjoying very good health recently, and, during the last few days, has been under the care of another physician of the town. On the afternoon of October 24, 1882, this physician injudiciously gave her twenty grains of morphia sulphate in bulk, and some whiskey. During the afternoon she took five or six ounces of whiskey, and about six o'clock in the evening ten grains of morphia. It was soon noticed that she had a peculiar expression of countenance; face somewhat flushed, and eyes bright and sparkling. She soon began to sob hysterically, and her husband, thinking she was merely despondent, tried to soothe her; but she told him it was too late, and that she would not be alive in the morning, at the same time pointing out a bottle of morphia which was subsequently found to contain nine grains of that drug. I was summoned at seven o'clock P.M., and found the patient unconscious and rapidly lapsing into a comatose condition; breathing very irregular, at times superficial, short, quick, and gasping, followed by an interval of from ten to fifteen seconds, during which the respiration was entirely suspended; face flushed, of a livid, cyanotic hue, swollen, and anxious; upper lip largely swollen; eyes injected, and *pupils somewhat contracted, but not nearly so much as they should be to correspond with the gravity of the other symptoms;* she was profoundly unconscious and could not be made to notice or answer questions by slapping, pinching, or in any way. Pulse, about 100.

I immediately gave a hypodermic injection of one-thirty-fifth grain of sulphate of atropia in aqueous solution. For about fifteen or twenty minutes the symptoms continued to increase in intensity, the breathing being very labored and shallow, and the pulse about 150 per minute. When the physiological antagonism of the atropia began to manifest itself, however, a remarkable change took place; the pulse diminished in frequency and became fuller;

the respiration became quite regular, fuller and natural in rhythm; the pupils dilated widely, and the countenance assumed a more healthful appearance. This favorable condition lasted from twenty to thirty minutes, when the pupils began to contract quite rapidly; irregular, shallow, and labored respiration supervened, and the pulse became very frequent. At eight o'clock, or one hour after the first, I gave a second injection of one-fortieth grain of atropia, which, in about fifteen minutes, was followed by the same favorable changes as the first; the breathing became full, deep, and regular; the pulse diminished in frequency, and the condition improved in every respect. At nine o'clock respiration was 16 per minute, pulse about 100, and temperature (Kew) 100° in axilla. About ten o'clock the patient began to notice loud noises, and a little before eleven called for water, of which she drank about an ounce without difficulty. As no unfavorable symptoms supervened, I left the case about eleven o'clock P.M.

October 25, 9 A.M.—The patient slept very naturally and comfortably all night, no unfavorable symptoms supervening, and this morning talks quite rationally; has a severe, dull, heavy, frontal and vertical headache, and some nausea, but otherwise feels quite well; no motor or sensory disturbances, except slight numbness in the knees, discoverable; pupils, slightly enlarged.

This case furnishes another illustration of the fact, insisted upon by Prof. Bartholow, in his work on the "Antagonism between Medicines and between Remedies and Diseases," viz., that the condition of the pupil *does not always* furnish a safe criterion by which the gravity of the case can be estimated.

If the above report is instrumental in inciting a more careful study of the antagonism existing between remedies and a careful perusal of such excellent works as that of Prof. Bartholow, above alluded to, it will not have been written in vain.

A CASE OF TRAUMATIC TETANUS; RECOVERY.

BY GEORGE W. LE CATO, M.D.,
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THE following case is reported as another among the comparatively few recoveries from well-developed *traumatic tetanus*:

Tom S., negro, 18 years old, well grown and healthy; wounded at a negro serenade on Sunday night, April 30th. The injury was the result of an accidental discharge of a musket heavily loaded with powder and wad. The muzzle being in close proximity to the patient's right leg, the charge entered the belly of the gastrocnemius muscle, making an irregular, ragged opening three inches in diameter and an inch in depth. The wound was undermined, blackened, and burnt with powder, and contained imbedded fragments of clothing and paper-wad. Separated from it by a bridge of integument was a smaller wound, about an inch in diameter. These were both carefully cleansed, pared with scissors, and dressed with carbolized applications. The case progressed well. The bridge of integument separating the two wounds broke down after a few days, making quite a broad and ugly-looking sore, but there was less suppuration and sloughing than might have been expected.

May 14 (two weeks after the accident).—The patient began to complain of fulness and pain in the chest. Had experienced some stiffness of the jaws for two or three days, which he had attributed to a carious tooth, and of which he had made no complaint. He described the suffering in the chest as a "swelled-up feeling," which rendered him unable to stoop forward, and which he located immediately behind the sternum. Was unable to open the jaws sufficiently to admit the finger. No appreciable stiffness of other muscles, and no spasm. The wound had now filled up to a level with the surrounding surface, and was in all respects healthy. Ordered a purgative, to be followed with 10 grains of Dover's powder.

15th.—Did not sleep well during the night; had been disturbed by twitchings and startings. The distress behind the sternum had increased and there was evident tonic spasm of the deeper muscles, especially of the right leg. No feverishness, and the appetite fairly good. Ordered 15 grains chloral and 30 grains of bromide of potassium, to be taken every two hours until he slept. The usual dressing of carbolized oil, and laudanum and water to be continued.

16th.—Had rested some after two doses of the anodyne had been given, but was repeatedly awakened by severe "cramps," attended with opisthotonos; the seizures coming on every three or four hours, with milder attacks at shorter intervals. Was irritable and despondent. Ordered one drachm doses of bromide every three hours during the day, and 20 grains of chloral every three hours during the night, until he slept. Concentrated nourishment to be systematically administered, and all the solid food given that could be gotten through the mouth. A poultice was applied to the wound.

17th.—Did not sleep until two doses of the chloral had been given. Was still sluggish from effects of the medicine at 8 A.M. Disease fully developed. All the muscles rigid from tonic contraction, and the abdominal walls as hard as a board. Suffered severely from attacks of clonic spasm, accompanied with violent opisthotonos, and attended with loud cries. These were especially induced by all efforts of movement, attempts to speak, or even being spoken to. Tincture of physostigma in 15 drop doses was now added to the bromide, and the medicine continued every three hours during the day; a half drachm of chloral to be given at bed time, and repeated if necessary. A special attendant was detailed to superintend the feeding.

18th, 19th, 20th.—Had taken each day a half ounce of bromide, and a drachm of tincture of physostigma, with 30 to 60 grains of chloral during the night; and been well fed with milk, soups, oysters, and boiled fish. Condition of the muscles apparently slightly improved, but the paroxysms as frequent and severe as ever. Had suffered attacks of spasm about every half hour during the night, but generally dozed in the interval. Constantly bathed

in profuse perspiration; pulse 65 to 75, but extremely rapid and irregular during pain. Had become an object of neighborhood curiosity, and was evidently worried by the presence of visitors; quarrelled constantly with the attendants, and had grown peevish and unreasonable. Considerable difficulty in voiding the urine, and was annoyed by a collection of gas in the bowel that evidently added to the suffering. Continued the treatment, and ordered an ounce of castor oil in calamus infusion, to be repeated as occasion demanded.

21st.—Experienced considerable difficulty in moving the bowels, but sundry doses of castor oil and epsom salts, followed with large enemas of warm water, brought away some hardened feces, with obvious good effects. Pulse feeble and slow, with tendency towards delirium. Considerable embarrassment of respiration during spasm.

22d, 23d, 24th.—Usual treatment steadily continued. Wound suppurating freely. Paroxysms less violent, but patient feverish, with inclination to talk at random. Had become suspicious of his mother and grandmother. The bowels were again moved, with some difficulty, and with some apparently good results. Slept at intervals during the day and night, and took large quantities of nourishment daily.

25th, 26th, 27th.—Tonic spasm of muscles evidently subsiding, and paroxysms less frequent and severe. Had been placed in an easy chair for an hour every day, at his own request, and apparently suffered less in that position. Notable improvement in the facial expression, the *risus sardonicus* having been well marked. Treatment continued as before.

From this time the case began to progress towards recovery. The bromide and physostigma were continued in gradually decreasing doses, and finally withdrawn. The chloral was continued at night for several days afterwards, in order to procure rest from annoying cramps that prevented sleep. A notable rise in the frequency of the pulse occurred, when the daily doses had been withdrawn, ranging considerably over 100 after convalescence was fully established. Professional visits were discontinued after June 1, a little over two weeks from the beginning of the attack.

In the present state of our knowledge of the pathology and essential nature of tetanus, it may perhaps be safely classed among the so-called self-limited diseases. Though death may occur at any stage from spasm, it doubtless results in the vast majority of cases from exhaustion. The above treatment was designed to answer, as far as possible, the plain indications: first, to control, as far as the resources of medicine would serve, the violence and danger of the paroxysms; second, to support the strength by securing rest and nourishment. Experience proves that where patients can be kept alive for ten days, there may be a reasonable prospect of recovery. It is a doubtful question how far the muscles of deglutition and respiration may be made available without the employment of adequate measures to control the element of spasm. That valuable aid may be derived from the three agents so persistently employed in the above case, the result seems to indicate; and it is fair to presume that a persevering system of *feeding*, not of liquids alone, but suitable solids, may do much towards assisting the patient over the period of greatest danger.

More than half of a pound of bromide of potassium was administered during the attack, and nearly two ounces of tincture of calabar bean!

MEDICAL PROGRESS.

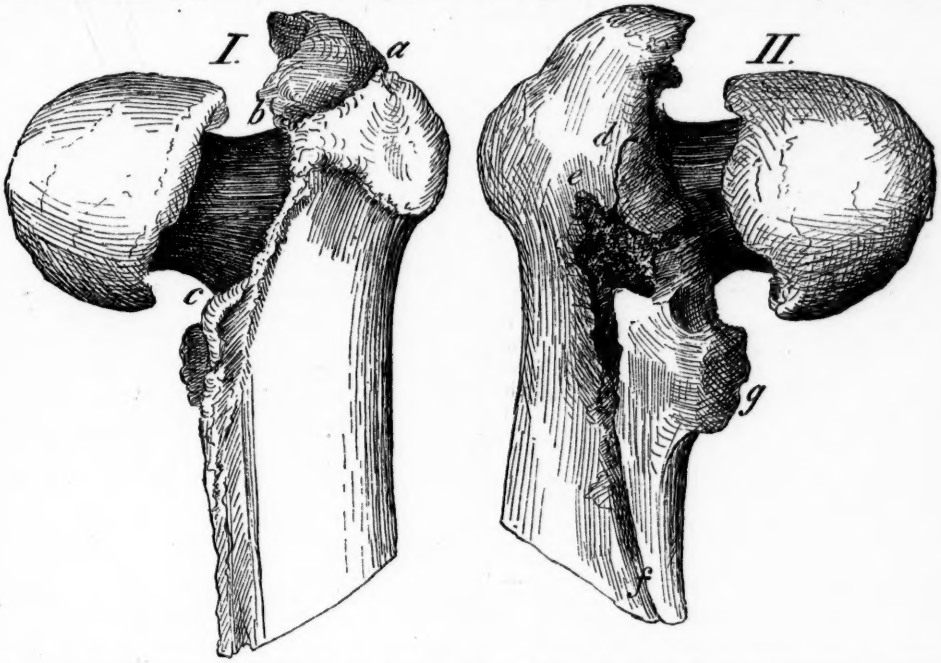
OCCULT CASES OF PYÆMIA.—DR. P. K. PEL (*Zeit. f. klin. Med.*, iv., 1882) gives an analysis of certain cases of obscure febrile disease, in which a source of pyæmic infection was only discovered on post-mortem examination. In commenting on the importance in diagnosis of remembering such a possibility, he remarks as follows: A previously healthy person is attacked with a quotidian pseudo-intermittent fever, associated with swollen spleen and disturbed digestion. No local cause of the (fever such as empyema, tuberculosis, etc.) can be made out by physical examination. The usual febrifuge medicines, given in sufficient quantity and in good time, have no abiding effect. In such a case the diagnosis will lie between—(1) occult or cryptogenic pyæmia; this is most likely when the feverish attacks are very severe; it is not excluded by the appearance of labial herpes: (2) ulcerative edocarditis; the physical signs will serve to confirm this: (3) irregular typhoid: (4) syphilis, even though for the time no other signs can be discovered.—*Practitioner*, Nov. 1882.

IMPACTED FRACTURE OF THE NECK OF THE FEMUR, WITH INVERSION OF THE FOOT.—DR. W. J. CONKLIN, of Dayton, Ohio, reports in the *Columbus Medical Journal* for November, 1882, the case of a large and fleshy but feeble woman, who, on the night of July 5, 1882, fell and injured her left hip. As nearly as could be ascertained, she fell backward and to the left, striking upon the great trochanter. She was unable to move without assistance, but under the impression that it was only a bruise, domestic remedies were applied for a few days after the accident.

When seen, she was in bed with the limb slightly flexed, rotated inwards, so that the patella faced the opposite thigh, and shortened to the extent of one inch. The position of the limb at once suggested a dislocation upon the dorsum ilii. A careful examination, however, showed that the head of the bone clearly rotated in the acetabulum, and that the trochanter moved with it. The left trochanter was distinctly nearer the anterior superior spinous process of the ilium than the right. Pain was caused by pressure over the trochanteric region, which seemed somewhat thicker than on the opposite side. Gentle traction had no effect in overcoming the shortening; moderate flexion gave but little pain. Crepitus was not obtained. An impacted fracture of the neck of the femur was diagnosed, and all manipulative efforts discontinued. She lingered for four weeks after the accident and finally died from exhaustion. The inversion of the foot remained constant during the progress of the case.

The *post-mortem* examination showed that, as is usual in impacted fractures of the neck of the femur, the line of separation at the base corresponds with the anterior and posterior intertrochanteric ridges. In the specimen the whole neck is strongly driven into the cancellated tissue of the trochanteric fragment, and forms somewhat less than a right angle with the shaft. The principal fracture on the anterior surface follows the intertrochanteric line to its termination in the linea aspera (*b*)

about one inch and a half below the lesser trochanter; the neck is driven in so as to leave a fissure, about one-quarter of an inch in width, between it and the anterior wall. A small fissure (*b a*) begins immediately above the tubercle and extends almost horizontally across the greater trochanter for a distance of one inch and a quarter. The principal fracture on the posterior surface corresponds with the posterior intertrochanteric line. The lesser trochanter is broken off and twisted inwards and forwards, evidently by the force of the impaction; without any injurious consequences. The blood of the general circulation was taken from the tip of the finger. In each method every precaution was taken to avoid the accidental introduction of organisms. The examination, in this way, of fifteen patients gave the following result. At the height of the disease the blood of the general circulation contains micro-organisms both isolated and grouped. These consist, almost exclusively, of spherical bodies, which have a delicate contour, appear to be homogeneous, and are analogous to



the fracture communicates with that on the anterior surface. The tilting forward of this fragment leaves an irregular gap (*e*) of more than an inch, at its greatest width, through which the impacted neck can be seen approaching the posterior surface and almost reaching the outer wall of the shaft. A narrow fissure runs (*d*) from the upper margin of this gap along the great trochanter. The head of the femur is somewhat roughened, and an irregular collar of bone projects from the greater portion of the corona, evidently the result of chronic arthritis.

When the specimen was placed in the hands of the artist, the fact that the impaction had been partially released was unfortunately overlooked, and hence the drawings represent the neck considerably longer, and the head less depressed than in the original.

Examples of this accident are of very infrequent occurrence. Profs. R. W. Smith, Bigelow, and Hamilton, have each met with but one case.

THE ORGANISMS OF TYPHOID.—MARAGLIANO, of Genoa, has published, in the *Centralblatt für die Med. Wissenschaften*, an important note on the uniform occurrence of organisms in the blood of patients suffering from typhoid. He has found them in the blood of the spleen as well as in that of the general circulation. The blood was obtained by means of a hypodermic syringe, the needle of which was passed through the abdominal wall into the substance of the spleen. Dr. Sciamano of Rome first showed that blood may be thus obtained from the substance of the spleen during life micrococci. Some of them are mobile. Similar organisms, again, were seen in the blood of the spleen, and in it, too, were others, rod shaped, also with delicate outlines, perfectly corresponding to those described by Eberth and Klebs. During convalescence these micro-organisms lessen in number in both the splenic and systemic blood. When quinine was given to the patient in large doses the organisms either disappeared from the blood, or were present in it only in small number. The blood from both the finger and the spleen was treated by the method of fractional culture, and a large number of rods were then obtained, similar to those seen in the fresh blood except that some of them were of greater length. The presence of such organisms in the blood of the spleen after death had been previously established by Sokoloff and Fischel, but Maragliano is the first who has demonstrated their presence in the splenic blood during life. He avoids the expression of any opinion as to their relation to the disease.—*Lancet*, October 28, 1882.

PYROGALLIC ACID IN THE TREATMENT OF VENEREAL ULCERS.—ANDRIEU (*Thèse de Paris*, 1881) believes the leading advantages possessed by pyrogallic acid in the treatment of chancres consists in the promptitude and certainty of its action, which involves no danger of injury to surrounding parts, and its complete destruction of the virus.

Slightly caustic, and at the same time astringent in its properties, it is superior to nitrate of silver on account of the profound alteration it effects in the substance of

the sore; and to other similar agents, in that it may be applied at any period, whatever may be the age or malignity of the lesion.

The specificity (if we may use the term), as well as the greater celerity of its action on the poison of the disease, render it preferable to iodoform, whose penetrating and disagreeable odor both annoys the patient and betrays the nature of his malady.

Iodoform, it is true, exerts an anæsthetic influence which is sometimes very desirable, but this is not, in every instance, to be relied on, while the pain produced by pyrogallic acid is not severe enough to constitute an obstacle to its use, and, moreover, can always be allayed by such means as the application of chloral compresses, or the subcutaneous injection of morphia.

The only precaution to be observed in the employment of the acid, is not to combine it with soap or any other alkaline substance, as by these we know that it is readily decomposed.—*Journal of Cutaneous and Venereal Diseases*, November, 1882.

PARALYSIS PRODUCED BY INJECTIONS OF ETHER.—DR. ARNOZAN (*Journ. de Méd. de Bordeaux*, 1882) has employed in several cases of variola the method of subcutaneous injections of ether, recommended by Dr. Ducastel (see MEDICAL NEWS p. 290). He found, however that when the injections were allowed to penetrate the muscles that a local paralysis was produced, with suppression of their faradic excitability, but with an increased excitability on galvanic stimulation, and that the response to the faradic current only appeared when the voluntary motor power was regained. The paralysis disappeared spontaneously in time. Cure was much accelerated by the use of the constant current.—*Archives Générales de Médecine*, November, 1882.

CASE OF MEMBRANOUS CYSTITIS.—At the meeting of the Cambridge Medical Society, on October 6th, MR. T. LUCAS produced a specimen from the bladder of a woman, aged 28, whom he had attended for this condition. On the ninth day after her confinement she had pain over the hypogastric region, and retention of urine. In a few days she had feverish symptoms, a temperature of 103°, and pain in the left groin, followed by swelling of the left thigh and leg. The use of the catheter was required for twelve days, after which time the leg was well. The urine contained mucus and albumen. Ten days later there was complete and sudden retention of urine, and on passing the catheter an obstruction was met with, which proved to be a piece of membrane, blocking the urethra. This was withdrawn in pieces and then a quantity of ropy urine escaped through the catheter. A few days later, a piece of membrane, about six inches by four, was removed, and subsequently another piece, ten by twelve inches, came away. Ten days later, the woman had entirely recovered. The membrane consisted of a fibrillated network, in the meshes of which were enclosed leucocytes, granular matter, and crystals of phosphate of lime, and seemed to be a cast of the mucous surface of the bladder. Mr. Lucas considered the case interesting from its rarity, and as indicating the manner in which calculous deposits might occur in the bladder. Such cases were more frequent in females, and might be of a croupous nature, and caused by a septicæmic condition, similar to that giving rise to phlegmasia dolens, and affecting the vitality of the epithelium, and thus causing cystitis. He mentioned a case of Liston's in which the mucous membrane of the bladder was removed entire, a sac six inches by four, as a result of injury.

DR. HUMPHRY said he had, in the case of a young woman, dilated the urethra with his finger, and removed a large amount of mucous membrane, covered with phosphatic deposit, and observed that the mucous membrane of the bladder had hardly any secretion, and very little glandular substance. In cases where the whole mucous membrane sloughed off, it seemed due to a process called by Leuchars necrosis of the membrane—*British Medical Journal*, November 4, 1882.

CASE OF SO CALLED IMPERFORATE HYMEN.—At the meeting of the Obstetrical Society of London, DR. MATTHEWS DUNCAN read a paper with this title. He was induced to relate the case by three circumstances. 1. There was a remarkable absence of any kind of suffering during nearly the whole time of the development of the disease. The patient had never menstruated nor suffered from any uneasiness in connection with that function until eight months before admission, when she was told by a medical man that she had a lump in the lower belly. Since then she had suffered from irregular achings. The author thought the probable explanation of this was that the uterine body was not distended, for facts showed that dilatation of the uterine body was more difficult and painful than dilatation of the vagina and uterine cervix. 2. The case illustrated the treatment without any injections, which had been the subject of remarks at a recent meeting of the Society. An incision was made by Paquelin's cautery knife. About twenty-five ounces of the usual treacly fluid escaped, about twenty ounces on the following day, and the last of it on the fifth day, in all about fifty ounces. At no time had it any fetor. No hypogastric pressure or interference with the flow was permitted. A piece of carbolized lint was put to the vulva. The patient made an uninterrupted recovery. He thought the risk of peritonitis was increased by the washing out sometimes practised. He thought the cautery knife was preferable to any other mode of making the incision, because its wound was not an absorbing surface. 3. The condition of the pudendum, rendering the term "imperforate hymen" erroneous and misleading. The vagina was closed by a membrane upon which the hymen could be seen entire and healthy, and after the operation the hymen could be seen to have its normal position and relations. He had made the same observation in other cases, and he had seen the hymen present when vagina and uterus were both absent. On these grounds he regarded the view of M. Budin (that the hymen was nothing but the anterior extremity of the vagina) as incorrect.—*Lancet*, Oct. 28, 1882.

ON A NEW METHOD OF AMPUTATION OF THE UPPER EXTREMITY.—At a meeting of the Académie des Sciences, M. Joselin presented a note by M. DESPRÈS, on a new method of amputation of the upper extremity. For a case of osteosarcoma of the scapula, M. Desprès performed with success "amputation of the shoulder," that is, entire removal of the arm, scapula, and part of the clavicle. His method of operating was as follows: 1. He tied the subclavian artery, external to the scalenus muscle, by a double ligature to avoid secondary hemorrhage. 2. He made an incision *en raquette*, commencing at the centre of the space separating the eminence of the spine of the vertebræ, at the internal border of the scapula, and at a level with its spine, and following its dorsum, turning round the salient portion of the shoulder and passing under the axilla as far as its centre, and afterwards rejoining the original incision at its starting-point. 3. He dissected a superior flap without interfering with the incision for the ligature of the vessel. 4. He divided the clavicle as near as possible to its middle. 5. He tied the axillary vein. 6. The scapula was detached after division of the pectoralis minor and dorsi latissimus, and then dividing the muscles inserted into the scapula. The suprascapular artery

should be tied if necessary, and the wound brought together by sutures. The dangers of this operation consist in, 1, the loss of blood; 2, the possibility of the entrance of air into the axillary vein; but they are not necessarily mortal. One complication occurred—the extremity of the clavicle perforated the skin; but M. Desprès thinks that it is better to have such a condition than to remove the entire collar-bone, and that this portion of the clavicle preserved covers in the superior aspect of the thoracic. The operation, he thinks, is of value in cancer of the scapula, and less formidable than removal of the scapula, leaving the arm, and may be well applied to cases of white swelling of the shoulder involving the scapula. It would seem very practicable in patients below twenty-eight years of age.—*British Medical Journal*, November 4, 1882.

TUBERCULAR SYNOVITIS OF TENDONS.—M. TERRIER made a communication on this subject at the meeting of the Société de Chirurgie held Oct. 25, 1882. This affection is extremely rare. The first description was by M. Lancereaux some time after M. Débove had found tubercles in a case of synovitis of the carpus; more recently it has been described by M. Bouilly and Prof. Trélat. M. Terrier reports three new cases, in two of which a histological examination was made. Giant cells were found in a mass of granulations formed of embryonal cells, and, at certain points, obliteration of the vessels, but no caseous nodes. Three different types of this disease may occur: the classic tubercular synovitis as described by Lancereaux, Bouilly, and Trélat; a form in which the fungosities are preceded by nodes which rapidly ulcerate; and a third type analogous to the acute tuberculosis of articulations, where the symptoms are those of acute synovitis with effusion. Its diagnosis is difficult. It can be primarily and essentially local, or an episode of a general infection: the prognosis and treatment will vary as either of these conditions exist.—*Le Progrès Méd.*, Oct. 28, 1882.

A NEW TREATMENT OF THE LACHRYMAL PASSAGES BY A DILATOR.—GALEZOWSKI (*Recueil d'Ophthal.*, August, 1882) has for six months practised a mode of rapid and forcible dilatation of the nasal duct without scarification of its walls, which he believes will replace all other modes of enlarging the duct. The instrument employed is a dilator, the blades of which, when closed, form a smooth, round probe, equal in thickness to Bowman's No. 4. When the blades are together the handles are separate. The closed blades are passed into the duct like an ordinary probe. The handles are then pressed together, and the blades in separating produce an effect equal to that of Couper's largest probe; at the same moment the instrument is withdrawn.

The pain, though sharp, is of short duration, and hardly a drop of blood is lost. Ordinarily there is no inflammatory reaction. If the dilatation is practised on inflamed and suppurating tissues, poultices are applied for a few hours afterwards.

A fine probe, No. 3 or 4, is passed on the third or fourth day, to determine whether the duct is free from obstruction, and this is followed by a No. 10 or 12, which is usually introduced without difficulty and with little pain.

By this method the author has obtained complete cures after other measures, perseveringly employed, have failed. Illustrative cases are cited.—*Ophthalmic Review*, November, 1882.

THE PATHOLOGY AND TREATMENT OF DIABETES.—At a clinical lecture at the Hôpital de la Pitié, PROF. LASÈGUE made some very interesting remarks on the pathology and treatment of diabetes. He divides diabetic patients into two classes: fat and lean, according as they may be found in either of these conditions. He also divides them into small and great diabetics, according to the quantity of the sugar which their urine may contain. The patient that excretes twenty grammes of sugar a day may be classed among the former; those who pass more than thirty or forty belong to the second class. Professor Lasègue attaches great importance to this division, for as the small diabetic patient never becomes a great one, each class retains its peculiar character; from which it may be concluded that a patient who presents great irregularities in the quantity of sugar he excretes, and appears to pass from one class to the other, is affected more with accidental or casual diabetes than with the true affection. A third class of diabetic patients is what Professor Lasègue calls "les diabétiques fixés," and these may be found among the two former classes. In this class of cases the quantity of sugar excreted varies only by a few grammes, whatsoever the treatment employed, or the diet adopted, but this should not be considered of much importance in a prognostic point of view, the quantity of sugar not being a fair criterion of the gravity of the disease; for although the proportion of sugar in the urine may remain stationary, the extent of the general disorder of the system may still be very considerable. This, however, does not apply to patients who pass 200 or 300 grammes of sugar in the twenty-four hours; these cases must be considered exceptional, and always of some gravity. M. Lasègue establishes two other forms of diabetes, which he designates the remittent and intermittent; in the first case the quantity of sugar was considerably reduced; in the second the sugar disappears, sometimes even completely, at certain periods; and although these states of remission or intermission may be considered more favorable than the other forms, yet patients of this category become cachectic, as patients of the other classes almost invariably do. This state, according to M. Lasègue, would constitute the principal indication of treatment; but he does not approve of the severe restrictions generally placed upon the diet and regimen of diabetic patients. He allows them to continue their usual mode of living, not even depriving them of farinaceous substances, or the use in moderation of sugar, water, or wine. As for gluten bread, so much prescribed for these cases, M. Lasègue condemns it *in toto* as not only being worthless, but it ends by disgusting the patient, takes away his appetite, and so hastens the cachectic state, which it is the very object of the physician to avert by all the means in his power.—*Lancet*, October 28, 1882.

THE TREATMENT OF EFFUSION INTO JOINTS.—PROF. VOLKMANN observes (*Centralblatt f. Chirurgie*, August 19, 1882) that in chronic effusion into the joints, he has several hundred times punctured and washed out the cavity with a solution of carbolic acid of from three to five per cent. without ever meeting with any accident or disturbance. As a general rule, from ten to fifteen syringes full, each capable of holding forty-five ccm., had to be employed, and the fluid allowed to run away, before it was discharged clear; the synovial fluid, which the added carbolic acid speedily renders turbid, was then known to be entirely removed, and the joint thoroughly washed. In order that the carbolic acid might exert its influence on every part of the surface of the capsule, the joint was then moderately filled by the injection of from one to three syringes full, and then submitted for a short time to movements of flexion and extension. A larger quantity of the solution than this was never left in the joint. No symptoms of carbolic intoxication were ever observed. After the washing-

out was finished, the limb was always surrounded by a Lister dressing, and kept immovable for some time on a splint. When the effusion was not of too old a date, recovery has always followed a single puncture and washing-out, although, as a rule, firm bandaging is required for the prevention of relapse, for diminishing the thickening of the capsule, etc. In bad cases, with great distention of the capsule and ligaments, due to large and old effusions, the puncture and washing-out have to be repeated two, three, and even four times, at intervals of several weeks, before the capsule contracts sufficiently. Iodine injections, which Prof. Volkmann formerly employed frequently, he has now discontinued. They have no advantage, and occasionally give rise to suppuration of the joint. In the worst cases with great distention and thickening of the capsule, villous growths, large fibrinous coagula, dropsy, loose bodies, or *gonitis fibrinosa* without fluid exudation, Prof. Volkmann always makes a double incision into the joint and introduces two short drainage-tubes, which, after carefully washing out the joint, are left in as long as any secretions issue through them. He is unable to say how often he has performed this operation, by far the most frequently executed on the knee, but certainly more than a hundred times. Even in these cases only disturbances of a very slight nature were met with, although bad cases were often treated. The general conclusion, therefore, is that both puncturing and washing-out the joint, and the double incision and drainage with the aid of antiseptics, may be declared to be operations unattended with danger and followed by satisfactory results. How thoroughly Prof. Volkmann has been convinced of this may be inferred from the fact that for a series of years he allowed Prof. Rancke to attach a manometer to the trocar, in order to institute experiments on the intra-articular pressure in the living man. None of these experiments did the slightest harm to the persons on whom they were performed.—*Practitioner*, November, 1882.

ERYSIPELATOUS ORGANISMS.—In several patients suffering from erysipelas FEHLEISON has found micrococci to be constantly present in the lymphatic vessels of the skin in the parts invaded by the inflammation. He has endeavored to ascertain whether these organisms can be regarded as the veritable cause of the disease. The method of his proceeding (according to an abstract which has appeared in the *Gazette Médicale de Paris*) was to excise minute fragments of skin, having first washed the surface with ether and with a solution of corrosive sublimate. These fragments were afterwards placed in gelatine prepared after the method of Koch. The micrococci rapidly grow, forming an abundant vegetation around the small fragments. By means of a platinum needle the mould was transplanted from one spot to another on the surface of the gelatine, and a thin membrane formed around each point of inoculation. The colonies of micrococci grow slowly, and at the usual temperature of the air their development soon became arrested. The organism appeared identical in appearance with those seen in the fresh preparations, except that in the gelatine the microorganism formed longer chains. Fehleison tested the virulence of the fourth generation of these organisms by an operation which most of our readers will probably agree with us in considering wholly unjustifiable. He inoculated the germs in the skin of the gluteal region of a woman, aged fifty-eight, suffering from multiple fibro-sarcomata of the skin. The inoculation was made by five punctures with a lancet. Up to that time the temperature of the patient was normal. On the evening of the inoculation the temperature was 37.7° C., but the next day the woman had a slight rigor, headache came on in the course of the day, and in the evening the temperature was 38.8° (101° F.). On the morning of the third day it was 37.2°, and in the evening 37.8°. On the fourth day another rigor occurred, and there was found on the left buttock an erythematous patch, prominent and circumscribed, having all the characteristics of erysipelas, and during the day it spread considerably in extent. The temperature was 40.4° (104.7° F.) in the morning, and 40.6° in the evening. On the fifth and sixth days the temperature was 41° C. (105.8° F.), and on the latter the woman fell into a state of collapse, from which she was roused by a subcutaneous injection of ether. On the seventh day the erysipelas occupied an area of a square foot. It remained stationary during the next three days, the temperature oscillating between 39.2° (102.6° F.) and 40.6° (105° F.); then the erythematous patch began to subside, but the temperature continued raised, and even on the thirteenth day was 40.0° (104° F.), but after the fifteenth day it was normal. As a consequence the infiltrations of the skin seemed to have slightly lessened. The author remarks that erysipelas can readily be communicated to rabbits, especially if the inoculation is made upon the ear. We echo the hope expressed by the editor of the *Gazette Médicale*, that those who endeavor to corroborate the observation, if rabbits do not suffice for their needs, will have the courage to operate on themselves.—*Lancet*, November 4, 1882.

TREATMENT OF CERTAIN SKIN DISEASES BY LINEAR SCARIFICATIONS.—AUBE (*Thèse de Paris*, 1881) concludes:

1. Linear scarifications constitute the best mode of treatment in tubercular lupus.

They are to be preferred to scraping, either alone or in conjunction with the former.

In erythematous lupus, scarifications act with less promptitude, and in acneic lupus they are ineffectual unless carried deeply and combined with punctures.

2. Together with this means, internal medication should always be employed.

3. Scarifications are seldom useful in the treatment of vascular nævi; yet it is well to give them a trial in such cases by operating on a small portion of the tumor.

4. They are more serviceable, when combined with epilation, in parasitic sycosis, with abscess of the derma, as also in non-parasitic sycosis (*impetigo sycosiformis*).

5. Greasy seborrhœa, so refractory under other treatment, is amenable to this.

6. In rosacea, scarifications can only be relied on before the hypertrophy has become too far advanced.

7. Notwithstanding apparent counter-indications, this practice has been successfully employed in some cases of keloid.

8. Scarifications probably act in several different ways—by substitution or revulsion, and also by obliterating a certain number of bloodvessels, so as to prolong the life of the healthy tissues, while those already becoming devitalized are disposed of by cutting off, even though but partially, their sources of supply.—*Journal of Cutaneous and Venereal Diseases*, November, 1882.

OZONIZED AIR AS AN ANÆSTHETIC.—PROF. BINZ has just published a second communication on the anæsthetic and hypnotic properties of ozone, but his results are marked by great inconstancy, and are no more encouraging than those first published; in some instances the inhalation of ozonized air soon caused sleep, while in other cases no effect whatever was observed.—*Berliner klin. Woch.*, October 23, 1882.

CÆSAREAN SECTION AND OVARIOTOMY WITHOUT ANÆSTHETICS.—JOHNEN (*Centralbl. f. Chirurg.*, 1882 Nos. 9 and 20) states that his teacher, Kilian, advised the disuse of anæsthetics during the operation of Cæsarean section, as he considered that great harm was frequently done by the production of vomiting, and that a conscious patient was not only less apt to disturb the surgeon by movements or straining than an anæsthetized one, but might aid him materially during the operation. He further thought that narcosis increased the tendency to subsequent hemorrhage. Johnen has acted on this recommendation, not only in Cæsarean section, but also in ovariotomy, and is so well satisfied that he now regards "narcosis" in Cæsarean section as "always unnecessary and often hurtful." In ovariotomy he considers it should only be induced in certain cases (not described) "where some psychic or somatic peculiarity renders it advisable." Riedel has performed ovariotomy twice, giving only enough chloroform at the beginning of the operation to render the patient insensible to the pain of the incision through the skin. He finds that the subsequent steps of the operation, even the securing and division of the pedicle, cause no pain, and that the patient can talk, drink wine, and move herself freely during the operation if requested to do so. Köenig lately performed ovariotomy on a "very decrepit" woman aged 65, removing a cyst which held "three large bucketfuls" of fluid, and tearing thorough firm adhesions, without anæsthetics. The patient made no complaint except during the first incision and during the introduction of the superficial sutures of the integument. These surgeons claim that the patients who are not anæsthetized are in better condition after the operation than those who are, and recover better.—*Glasgow Medical Journal*, November, 1882.

THE FERMENTATION OF NITRATES.—The researches of SCHLOESING and MUNTZ have shown that the formation of nitrates in the soil and in organic liquids is due to the development of ærobic organisms. Certain facts recorded by Boussingault, Schloesing, and others have suggested to MM. Gayon and Dupetit that the opposite process, the reduction of nitrates, may also take place in a similar manner. The results of an investigation which they have made has been communicated by them to the Académie des Sciences of Paris. To street drain water nitrate of potash was added in the proportion of .02 gramme per litre, and then some decomposed urine. The nitrate disappeared gradually, and the liquid became filled with microscopic organisms. Successive cultures of these enabled the experimenters to effect the reduction of one and even two decigrammes of nitrate of potash per litre. By employing decoction of chicken as the basis they were enabled to decompose as much nitrate as amounted to 5 per cent. of the liquid. That the organisms which developed under these circumstances were really the cause of the denitrification was proved by sterilizing the liquid by heat, or by the addition of chloroform, or sulphate of copper, when the nitrate of potash underwent no alteration. The organisms concerned seem to be anærobic; if they were cultivated in a large surface, and in contact with air, either they did not produce the effect at all, or their action was considerably lessened. The temperature most favorable to the process was found to be between 35° and 40° C. The presence of organic matters is absolutely necessary, but all organic substances are not equally suitable. Of those which have been tried, olive oil, and oil of sweet almonds, glycerine, glycol, sugar, alcohols of the fatty series, tartrates, etc., the best results were given by sugar, ordinary alcohol, and propylic alcohol. For instance, three or four drops of the latter, added to a liquid in which the denitrification was suspended, at once renewed the process. The oils became rapidly saponified. Considerable interest attaches to the action of two substances, carbolic acid and salicylic acid. Employed in the proportions usually considered to be antiseptic, and even in still larger quantities, they not only did not interefere with the growth and activity of the organisms, but were themselves destroyed with the nitrate, just as sugar or propylic alcohol would be. The destruction of carbolic acid by organisms has been already observed by Muntz, even when it amounts to several grammes per litre. Thus under favorable circumstances the process of the destruction of nitrates presents all the characters of an energetic fermentation. It is accompanied by a rapid growth of organisms, and an abundant liberation of gas. This gas consists of pure nitrogen, and represents a considerable proportion of that contained in the nitrate. The rest probably forms ammonia. The oxygen forms carbonic acid, which remains combined in the liquid. The influence of the organic matter is thus to cause the products of the fermentation of the nitrate to enter into new combinations. Other nitrates behave in the same manner as the nitrate of potash.—*Lancet*, Nov. 4, 1882.

BACTERIA OF OPHTHALMIA NEONATORUM.—DR. FEDOR KRAUSE has adopted Koch's method in cultivating the micrococci of ophthalmia neonatorum (*Berl. klin. Woch.*, No. 37). The cultivation from pus succeeded only at a hatching temperature, and in sterilized blood-serum of mutton. The further cultivation of the pure material was found to be possible at the temperature of the room in every favorable kind of food. Pus from the eyes of twelve children was used, and in all these cases a pure cultivation was obtained, after the presence of the characteristic micrococci had been demonstrated in the secretion. In two cases the breeding was continued by successive inoculations up to the forty-second and fiftieth generation. The micrococci are figured like two rolls opposed end to end; they retain their appearance for the most part in cultivation in artificial media, though they may present alterations in size. In pure culture the luxuriating micrococci appear gray and yellowish under a low magnifying power; they grow uncommonly slowly, and spread themselves out in the form of a thin covering away from the point of inoculation towards the sides of the vessel; the surface of the film has a moist appearance. Inoculations performed on the cornea, conjunctiva, and urethra of adult rabbits, on the cornea and conjunctiva of young cats, pigeons, and mice, yielded negative results, whether the material used was pure discharge from the eye or that from a pure breeding. As little result was got by subcutaneous injection into rabbits and mice. But inoculation with stuff from pure cultivation caused in new-born rabbits a purulent ophthalmia, which came on in twenty-four hours, and in one animal led to marked suppuration and finally ulceration of the cornea. In researches on five cases of granular lids, no bacteria were found in excised bits of the mucous membrane, and a negative result was the outcome of cultivation experiments—*i.e.*, to ascertain whether breeding would render the micrococci visible, as there might have been so few as not to have been found by the microscope.—*Medical Times and Gazette*, November 4, 1882.

CYSTICERCI AND TAPEWORM.—The coexistence of cysticerci and tæniæ in the same subject at the same time has been very rarely noted. An instance was described by MM. RATHERY and SEVESTRE at a recent meeting of the Société Médicale des Hôpitaux. The existence of the tapeworm (tænia solium) was not suspected until it was found post mortem in the small intestine. The patient died from heart disease. Fif-

teen or sixteen cysts were found in different parts of the body. All were situated in the substance of the muscles. The existence of heart disease, and of hæmaturia shortly before death, had led to a suspicion that some of the cysticerci might be located in the kidneys or heart, but the autopsy showed that all the viscera were free.—*Lancet*, November 4, 1882.

THE HYPNOTIC VALUE OF TANNATE OF CANNABIN.—DR. FRONMÜLLER, of Furth, has been investigating the properties of a preparation of Indian hemp, the tannate of cannabin, which he obtained from Merck, of Darmstadt. The tannate of cannabin is a yellowish-brown powder, insoluble in water or ether, slightly soluble in alcohol, and easily dissolved in water made slightly alkaline. It has a taste like tannin, and a not unpleasant smell. In the distillation of Indian hemp, two volatile oils are developed, cannabin oil and its hydrate. These are rapidly acting irritant poisons. They are said to be removed in the preparation of the tannate. Dr. Fronmüller states that he has used Indian hemp itself for thirty years, and that there has been a steady increase in the strength of the preparations furnished him. Thus, thirty years ago, he began with a dose of eight grains, ten years later he had to reduce it to four, and latterly to two grains. The dose of the present preparation, the tannate, ranges between gr. ii and gr. x, the most frequent dose being gr. v. The drug was used fifty-seven times in hospital, and six times in private practice. The patients consisted of twenty-one men and forty-two women, for the most part between twenty and forty years. Forty of them were suffering from phthisis, the remainder had different diseases, generally of a chronic nature. The common symptom in all cases was insomnia, and it was for its hypnotic effect that the cannabin was given. Good results were obtained in thirty-seven cases out of the sixty-three, and moderately good results in fifteen cases. It was called a good result when quiet and uninterrupted sleep came on within an hour after taking the medicine, the patient awakening with no toxic after-effects. In twelve cases no result was produced. Many of the patients had been taking opium. From the sixty-three trials thus reported, Dr. Fronmüller concludes that *cannabin tannicum* is a very useful hypnotic, powerful without being dangerous, and one which does not disturb the secretions or leave unpleasant toxic after-effects, if given in proper dose.—*Practitioner*, Nov. 1882.

MERCURIAL SALIVATION.—At a recent lecture at the Hotel-Dieu, DR. PANAS (*Gaz. des Hôp.*, No. 9) strongly insisted on the employment of means for the prevention of mercurial stomatitis, which, in his opinion, is no indication of the system being saturated with mercury. It is a complication which greatly impedes treatment when it occurs, and which depends upon an anterior alveolo-gingival stomatitis, and may be always prevented by curing in advance, by local means, the condition of the gums and alveoli. This treatment consists first in the removal of the tartar, and then in the application of substitutive topical substances, the chief of which employed by Dr. Panas are tincture of iodine, and carbolic acid diluted to a twentieth; these substances, to be of use, being introduced to quite the bottom of the alveoli. If the gums are quite healthy, and astringents are applied daily (as tannin, catechu, etc.), they may be kept sound and healthy however long the mercurial treatment is continued; and when patients come in with ulcerated or bleeding gums, and loosened and displaced teeth, this condition of things may be remedied in a few days by the above-mentioned procedure. If such precautions be not taken, the irritating action of the mercury exasperates the stomatitis and brings on salivation. Dr. Panas considers the much-praised chlorate of potash quite inefficacious in salivation, and even capable of doing harm by the irritation it produces.—*Medical Times and Gazette*, November 4, 1882.

SUPRA-CLAVICULAR PSEUDO-LIPOMA AND RHEUMATIC ŒDEMA.—M. POTAIN read a paper with the above title before the Académie de Médecine, at the meeting held October 7, 1882. This paper is a reply to the memoir of Verneuil on supra-clavicular pseudo-lipoma, which was described as being characterized by a swelling in the supra clavicular fossa, which is thus transformed into a prominence slightly above the level of the adjacent parts. M. Potain has been able to confirm Verneuil's descriptions, and gives an account of twenty cases in which the elastic swelling was found; in all of the cases there was a marked rheumatic diathesis. In some cases the swelling exceeded the limits of the space, bounded by clavicle, sterno-mastoid, and trapezius, and in a few instances similar tumors were found in other localities where there is normally found loose cellular connective tissue capable of sustaining deposits of fat. Distinct œdema was also associated with these tumors, and M. Potain believes that both the œdema and morbid increased deposit of fat are caused by the same morbid tendency.—*Le Progrès Médical*, October 21, 1882.

REDUCTION OF DISLOCATIONS OF THE SHOULDER.—The number of modes of reducing dislocations of the shoulder shows that the best plan is yet generally unknown. A valuable paper on this subject was read by M. KOCHER at the meeting of the International Congress in London. Referring only to the subcoracoid form of dislocation, he asserts that the aim of the surgeon should be to open out the rent in the capsule, and to relax the parts of the capsule which are untorn but tightly stretched by the false position of the head of the humerus. The rent in the capsule is on the inner side of it; the most tense part is in the upper portion, where it is thickened by the coraco-humeral band; the lower part of the capsule is also tense. Kocher asserts that by rotating the arm outwards the top of the capsule is itself rotated out and the rent rendered patent. If now the arm be advanced in the vertical median plane, the upper part of the capsule is relaxed, and the head of the bone, being prevented passing forwards by the lower fibres of the capsule, enters the glenoid fossa. He accordingly directs that for the reduction of this dislocation the following manipulation should be practised. The patient should be seated, with the surgeon on his left hand. The elbow-joint is first to be flexed to a right angle, and the joint firmly pressed against the side of the chest; then while holding the elbow in contact with the body the arm is to be slowly, gently, and steadily rotated out until firm resistance is encountered; then maintaining this rotation the arm is to be raised forwards and a little in, and lastly to be rotated in and the hand brought towards the opposite shoulder. It is stated that there is no need for anæsthetics when this manipulation is employed. This method, which has great advantages over those in common use in this country, is stated by M. Ceppi (*Revue de Chirurgie*) to be especially valuable in old dislocations, enabling them to be reduced often without any force and without anæsthetics. M. Kocher has succeeded in twelve cases of dislocations, varying from three weeks to four months old. In one case, where the bone had been displaced for eight weeks, he fractured the shaft of the humerus in attempting the reduction, and six weeks later, when the bone was united, failed again. The patient was seventy years of age. We believe that this method of reduction is worthy of far more attention than it has yet received.—*Lancet*, November 4, 1882.

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THE LEGAL RELATIONS OF PHYSICIANS AND THE CORONER.

TIME was when the coroner's inquests were numbered by the score: now it is by the hundred, and threatens soon to be by the thousand. The coroner's claims have gradually been extended to cover large classes of cases never contemplated by the law, until there are few citizens who have escaped disagreeable contact with his office, and the public treasury is depleted at least by additional expenses if not by additional salary. We are glad to see that the Supreme Court of Pennsylvania has lately decided a case so clearly that its result must be to restrict coroners in this State within their just limits.

Mishler, the Coroner of Lancaster County, sued the County to recover fees for an inquest in a case of death from "a paralytical stroke." The Supreme Court held that where there is "no ground for suspecting that the death was not a natural one, it is a perversion of the whole spirit of the law to compel the county to pay him for such services," and he is not to be paid.

The only object of a coroner's inquest in any case is here indicated, viz., when death is presumably *not from natural causes*, but from accident, poisons, or other unnatural causes, the coroner investigates the case with a view to determine whether any person is responsible for the death, and if so, to take the necessary steps to bring him to justice.

There is so much ill-defined knowledge of the law as it exists in Pennsylvania, and especially in Philadelphia, that it will be well to examine it and state it clearly for the information of the profession.

In order to understand exactly what the law is, let us quote it from the *Medical Register*, page 279: "It shall be the duty of the coroner of the city and county of Philadelphia, to hold an inquest on the body of any deceased person who shall have died of violent death, or whose death shall be sudden; *provided* that such sudden death be after an illness of less than twenty-four hours, and that no regular practising physician shall have been in attendance within said time, or that suspicious circumstances shall render the same necessary, which said suspicions shall first be sworn to by one or more citizens of said city."

There are therefore three classes of cases in which it is both the right and the duty of the coroner to hold an inquest. First, in all cases of certain violence. Yet we have known his right to be contested and a physician to give a certificate in a case of death from burn, and again, not long since, in a case of death after a fracture of the thigh from a fall—both clearly encroachments on the rights of the coroner to the disadvantage of the community. For in *all* cases of death by violence (which includes murders, suicides, accidents, poisonings, etc.) the fact as to whether any person was responsible for the violence must be established by a judicial investigation, *i. e.*, by the coroner.

Secondly, cases in which though violence is not certain, yet there are suspicious circumstances about them. But these suspicions must be sworn to by at least one citizen before the coroner dare interfere.

The third class, however, is the one about which there is the chief misapprehension. It is a very wide-spread opinion that the law requires the coroner to be informed, and to hold an inquest, in every case in which the physician has been attending for less than twenty-four hours before death. This is not the case. The exact requirement of the law is twofold: first, that the *sickness* has been of *less* than twenty-four hours duration; and, secondly, that *no* physician has been in attendance within said time. If, in any case of sudden illness of less than twenty-four hours' duration, a physician *has* been in attendance, at *any time* before death, no matter how short that time be, it is not only his right, but his duty, to give a certificate, unless, of course, the case should belong to either of the clas es previously described.

Cases of sudden death after an illness of *more* than twenty-four hours' duration, do not come under the jurisdiction of the coroner, whether any physician has been in attendance or not.

And the word "attendance" is evidently not to be construed to mean an actual visit to or by the patient within the last twenty-four hours before death. Dr. Walter F. Atlee's case, a year ago, is in point. A patient with valvular disease of the heart, who came

to his office once in a week or so, suddenly died. Dr. Atlee very properly gave a certificate. But we are informed that the coroner actually exhumed the body without the knowledge of the dead man's relatives, made a *post-mortem* examination and held an inquest, all in clear violation of the law, unless there were suspicions sworn to before the coroner. At the inquest he also formally fined Dr. Atlee $25 for giving the certificate. We do not believe that there is any law authorizing such a fine, even if Dr. Atlee had done wrong, and we do know that Dr. Atlee defied the coroner to collect the fine, and he has never dared to attempt it. Sudden death is, indeed, to have an added horror, if in every case in which a physician has not actually seen the patient for twenty-four hours before death, and in which not the slightest suspicion of any violence or wrong exists, a body more precious to us than gold, is to be given over to the rude handling of strangers, a repulsive legal *post-mortem* examination is to be made, the house of mourning to be ruthlessly invaded, and the heart-stricken relatives, while awaiting the funeral, to be forced to appear amid the unsavory crowd about the coroner's office, and the facts to be blazoned abroad in the public press! Most certainly in this case the coroner exceeded his functions. All of us have patients whom we only see once in a week, a month, or even three or six months; as, for instance, cases of infrequent epileptic fits, chronic Bright's disease, Potts's disease, paralysis, slow spinal disease, heart diseases, in nearly all of which sudden death may, and often does, occur, and in which a certificate of death it is not only our right, but our duty, to give, if it be the result of the already existing disease. If, however, it be from an intercurrent disease then the case must be decided upon its merits, independently of the chronic disease.

The law of March 8, 1860, section 3 (*Medical Register*, page 274), requires "that whenever any person shall die in the city of Philadelphia, it shall be the duty of the physician who attended during his or her last sickness, or of the coroner when the case comes under his notice, to furnish within forty-eight hours after the death . . a certificate setting forth, as far as the same can be ascertained, the full name, sex, color, age, and condition (whether married or single) of the person deceased, and the cause and date of death," and section 5 fines him five dollars for either refusal or neglect to do so.

But suppose the physician, called, it may be a short time before death, is not certain of the cause of death, what shall he do? We take it that if no violence has occurred, and no suspicious circumstances require its being reported to the coroner, that it is the right and the duty of the physician to give a certificate stating the cause of death, in the words of the law just quoted, "so far as the same can be ascertained." If there be no violence and nothing suspicious about the death, society does not care a button as to whether it was this or that disease. It is purely a scientific question. The doctor, therefore, should request a post-mortem examination, and in nearly all cases upon proper explanation this would be accorded, and would clearly reveal the cause of death. Where it is refused he should report that fact with all other necessary information to the Health Officer. But if there be the slightest suspicion of wrong, he should report it to the coroner. But according to the strict letter of the law, we do not see that the coroner could take charge of the case, unless the suspicion were sworn to. That, however, concerns him and not the doctor.

But suppose *no* physician has been in attendance during the last illness, may a physician called after death give a certificate? Clearly not, though we have heard of its being done. What then is proper? Who will give the necessary certificate? If the illness has been of less than twenty-four hours duration the coroner must be notified, and he must hold an inquest, and if need be have a *post-mortem*, and he will furnish the certificate. If the illness has been for more than twenty-four hours (and there is no violence or suspicion of wrong-doing), it does *not* come under the coroner's jurisdiction, but the law of 1860, section 4 (*Medical Register*, page 275), specially provides that "in case any person shall die without the attendance of a physician, or if the physician who did attend at the time of the death refuses or neglects to furnish a certificate as aforesaid, it shall be the duty of the undertaker, or of any other person acquainted with the facts to report the same to the Health Officer, who shall be authorized to give a certificate of death as aforesaid, provided it be not a case for the attendance of the coroner," which last we have shown is not the case.

Very many of the inquests by the coroner of this city are held without any warrant of law. Especially is this the case in our hospitals. No matter what the duration of the illness in a hospital patient, as a physician is in attendance in every case, the coroner has no right to make a *post-mortem* or to hold an inquest, except where the death results from violence or there are suspicious circumstances which are sworn to.

We have quoted the law from the *Register* as it is more accessible to the profession, and by a comparison with West's Digest we have ascertained its correctness.

"THE GOSPEL OF RELAXATION."

HERBERT SPENCER never lacks an audience. His criticisms on us as a people are both timely and in

the main just; and they have been read with both interest and profit. In his recent after-dinner speech, or homily, as he called it, he has taken us to task for our overwork, and our early gray hairs; but withal, it seems to us that he missed one clear distinction which it is of the utmost importance to bear in mind—a distinction which his countryman and our distinguished *confrère*, Mr. Seymour Haden, however, has not forgotten, and of which physicians are, in an eminent sense, the best judges—namely, the distinction between *worry* and *work*. Indeed, Mr. Spencer himself is a conspicuous example of the truth that even a feeble man, physically, if he will work wisely and in a way to avoid great friction, may accomplish even herculean tasks.

We do not believe that work alone, even when fairly prolonged and severe, frequently shortens life. It is rather the worry that too often goes hand-in-hand with it. Our furious methods of work, our intense excitement, these are the evils that are to be deprecated above all others. Of course, we assent to Emerson's doctrine that a man must first of all be "a good animal." We say Amen! to the preaching of the "gospel of relaxation," as well as to the scriptural maxim, to learn of the ant. Monotonous daily toil will furrow the face, and make the healthy, hearty child prematurely old. Intense application to business breaks down many a merchant. Black Fridays will kill or maim many a stock-broker and speculator, whether in grain, or cotton, or stocks. But what does all this mean? A struggle for bread, an intense strain on the nervous system, a heedless, headstrong hurry to be rich. The mast that will endure a steady gale will snap and go by the board after oft-repeated sudden flaws.

We doctors see this only too often in our patients, and not a few of us exemplify it in our own lives. When work becomes a "passion," as Mr. Spencer points out is too often the case on this side of the Atlantic, it ceases to be work pure and simple. It is accompanied by great anxiety and by heavy responsibilities. Thousands of dollars, it may be one's whole fortune, are at stake; meals are hurriedly eaten, or are not eaten at all; the hours properly claimed by relaxation and recreation are given up to planning for the morrow's business; even the hours of sleep are curtailed; and such high-pressure work, such worry and friction, soon tell on the physical health. Digestion is impaired; sleep will not be woed even by weary eyelids; the worried brain, never rested from its anxious cares, at last gives out, and the hale man of yesterday is to-day a wreck. None has more clearly or forcibly shown these evils in their true proportions than Dr. H. C. Wood in his primer on *Brain Work and Overwork*. The physician is also liable to be a victim of such unwise methods of work. The very nature of his profession involves great worry. The larger his practice, the larger the number of his serious and important cases. Men of influence and large business, women of social and family distinction, lying at the point of death, tax his skill to the utmost, and weigh him down with care. Disease will not brook any "thus far and no farther," but encroaches on his hours of sleep, of meals, and of recreation; and he, too, follows his patients to sickness, and sometimes to the grave.

Moreover, these evils are often exaggerated and reinforced by the vicious means employed to stay the evil, or to gratify the passions. Excessive use of stimulants and narcotics, such as alcohol, tobacco, coffee, and the like, often provide a temporary relief, only to be followed by greater subsequent depression, and surer disaster.

But we believe a brighter day is dawning. As society accumulates wealth it is more apt to take its ease. The London Stock Exchange, or the Paris Bourse, is very much like that of New York or Philadelphia, but, as a rule, Englishmen take life much more easily than we do. The east and the west in this country, while alike greedy of gain, differ materially in their methods of living as a people. The tone of society changes perceptibly the further one goes west of the Alleghanies. Moreover, our people are learning the value of the summer holiday. Of course there are men who make Long Branch and Saratoga a part of Wall Street, but the population as a whole take far more and far longer holidays than they did twenty years ago. Who but nabobs then had seaside or country houses to which they took their families for weeks and months? What business man a score of years ago claimed more than a week or ten days as his own? What stores closed at 5 P. M., and on Saturdays at 3, or even at 1 o'clock, in July and August, till within a decade?

Rest and relaxation are steadily growing in favor, and so diminishing friction; and while business men are building larger establishments than ever before, yet they are wise enough to hire skilled labor to take responsibility as well as to do manual work.

CIRRHOSIS OF THE LIVER.

IN a recent lecture on cirrhosis, LANCEREAUX recognizes several forms: the syphilitic, the malarial, the alcoholic. In that form of the disease due to syphilis, the liver is deeply lobulated, furrowed, and adherent by strong fibrous bands to the neighboring organs. The connective-tissue formation which divides the different parts of the parenchyma grows thicker towards the periphery, and the cellular hyperplasia is especially abundant about the lymphatic

and arterial systems. Ascites rarely occurs, and when present is readily cured. There is neither dilatation of the veins nor icterus, unless, indeed, the new formations compress the biliary ducts.

The malarial liver has a considerable size; its consistence is firm, and its surface presents a granular appearance, but less so than the alcoholic liver. The color recalls the appearance of granite or porphyry. The hyperplasia of the connective tissue, both inter- and intra-lobular, preserves the embryonic character, and the gland-cells contain numerous pigment granules. The principal clinical characteristics of these cases are increase in the volume of the liver and of the spleen, long-standing icterus, and slow development without pronounced symptoms.

Alcoholic cirrhosis presents itself under two forms. 1. The liver increased in size, the surface glazed or tanned, and presenting a hyperplasia of the connective tissue, both inter- and intra-lobular, with granular and fatty degeneration of the gland-cells. 2. Contracted, hard, fibrous, and marked by granulations of considerable size, generally distributed throughout the organ.

The diagnosis in the alcoholic form rests on the considerable emaciation of the patient, the dryness of the skin, the enlargement of the abdomen due to the accumulation of fluid, and the increasing dilatation of the veins of the abdominal wall. Death is usually due to mechanical interference with respiration. In the syphilitic form the liver, by reason of its volume, resembles the condition due to malarial poisoning, and ascites is equally wanting. Although jaundice is a protracted symptom in the malarial liver, it is a concluding symptom in cirrhosis of alcoholic causation.

THE DIAGNOSIS OF UNILATERAL RENAL DISEASE.

IN our issues for March 4th and 11th we considered the question of renal operations at some length, and recognized the fact that there was great difficulty in some cases of deciding on which side the disease existed, and whether the opposite kidney was sufficiently active to justify the removal of the diseased one. Glück has lately proposed what is at least an ingenious method of deciding this question, which doubtlessly will be tested before long and its value determined. He proposes, after exposing the presumably diseased kidney through a small wound, to secure the ureter by a temporary clamp or ligature; if a double ureter exist, both tubes must be closed. A solution of ferrocyanide or iodide of potassium, or some other rapidly eliminated salt, is then to be injected subcutaneously and the urine tested in a few minutes. If no evidence of the salt appears in the urine, the presumption is against the normal condition of the opposite kidney, and the operation should be abandoned. Of course a single, horse-shoe kidney could not be diagnosticated, and the proposed exploration might prove to be so difficult as to be unjustifiable; but in ordinary cases of doubt, the suggestion is at least deserving of consideration.

PRECAUTIONS AGAINST CONTAGIOUS DISEASES.

SOME months ago we adverted to the want of legal provision to prevent the spreading of contagious diseases by funerals, hacks, etc., and we are glad to see that the Philadelphia City Council's Committee on Law, at the instance of the Board of Health, have agreed to report an efficient bill which may well serve in most respects as a model to other cities that have none. As the matter is of such great importance and wide application, we note briefly its provisions.

Any person sick with a contagious disease using any public conveyance without previous notification to the driver, is to be fined $25 and to recoup the driver for all consequent expenses and losses. Public funerals in the case of death from a contagious disease are prohibited under a penalty of $50, and the person authorizing the notice of the death must publish the cause of death under a penalty of $10. Persons letting houses or rooms without being thoroughly disinfected, which have been occupied by patients sick of such diseases, are liable to a fine of $100, and any person who exposes himself, or any attendant who allows him to expose himself without proper precaution in the public streets or conveyances, or any one who similarly exposes bedding, clothing, rags, etc., which may thus spread disease, is to be fined $25.

One most serious and fertile source of contagion unfortunately has been forgotten. There should be a penalty inflicted on parents who send their well children to public schools while cases of scarlet fever, measles, smallpox, or varioloid exist at home. Careful parents under competent medical guidance might often do so without harm; but it would scarcely do even to trust to a doctor's certificate that the circumstances would render it safe, for the doctor is often ignorant of what relaxation of his rules exists when he is absent, or he may be too good-natured, or anxious not to offend by a refusal. So many of the public school children come from houses in which the physical conditions are such that proper isolation cannot possibly be had, that the rule of exclusion must be absolute or it will be worthless.

We commend the bill, and trust that in enacting it into a law the amendment we propose will not be overlooked.

IT is so rare that an Englishman sees anything to praise in this country, that we are surprised to find

the Waverly Convalescent Home warmly commended in a letter published in a recent number of the *Lancet*.

This home is said by the correspondent to be very complete; "indeed," he says, "I have never seen a more model institution than the Waverly Convalescent Home." As some of our readers may not be acquainted with this home which excites the enthusiasm of a "roving correspondent" from England, we venture to explain that it is the convalescent house of the Massachusetts General Hospital. It owes its existence chiefly to the philanthropic labors of Miss Russell, and is devoted to the reception of the *convalescent poor* from the hospital, pay patients being excluded. It is situated at Waverly, seven miles from Boston. It is truly a "model institution," as described by the *Lancet* correspondent, and in this case all the praise bestowed is well deserved. It were well, if all our great public hospitals were provided with "homes" in the country to which their convalescents could be sent, to more effectively recuperate than is possible under the sanitary conditions usually surrounding this class of subjects in our cities.

WE have the pleasure, through the courtesy of Col. Seaton, of laying before the profession a *résumé* of the mortality statistics of the United States which have been collected by the United States Census Bureau, in accordance with plans and forms prepared by Surgeon John S. Billings, U. S. A. These statistics are particularly valuable, since they furnish us for the first time with reliable information as to the death-rate of the whole country, which, it is gratifying to find, compares favorably with that of other civilized countries.

SPECIAL ARTICLE.

MORTALITY STATISTICS OF THE UNITED STATES.

THE Compendium of the 10th Census which is now nearly through the press, and will probably be ready for issue by the time Congress meets, is a very interesting document to statisticians, not only for what it contains, but for the glimpse which it gives of what may be expected in the full quarto reports.

Through the courtesy of Col. Seaton, we are able to give our readers so much of the text of the Compendium regarding the mortality statistics as is of special interest to physicians, independent of the tables which belong with it.

The total number of deaths recorded and tabulated as occurring in the United States during the census year is 756,893, being a death-rate of 15.1 to the thousand. This death-rate is decidedly higher than that given in the census of 1860, viz., 12.5, and of 1870, viz., 12.8 per thousand, but this does not indicate any actual increase in the number of deaths as compared with the living population. It shows, rather, that the efforts made in the census of 1880 to obtain more complete returns of deaths than had been collected in previous enumerations have been to some extent successful.

Excluding the States of Massachusetts, and New Jersey, and also the following named cities: Baltimore, Bangor, Brooklyn, Chicago, Cincinnati, Charleston, Cleveland, Indianapolis, Louisville, Milwaukee, Mobile, Nashville, New Orleans, New York, Philadelphia, Pittsburg, Providence, Richmond, St. Louis, San Francisco, and Wilmington, the number of deaths actually reported by the enumerators was 520,339. To these returns of deaths furnished by the enumerators, there were added from registers furnished by physicians throughout the country, 61,020 additional cases of death. For the States of Massachusetts and New Jersey, and the cities above mentioned, the State and municipal registration records of deaths were copied and used in the tabulations. These records are based on a regular system of registration, and on burial permits, and are therefore probably very nearly accurate. The records give 175,534 deaths.

In order to obtain some positive data from which might be calculated the amount of deficiency in the enumerators' returns of deaths, their returns for the State of Massachusetts, excluding the city of Boston, and for the whole State of New Jersey, have been tabulated and compared with the records furnished from the State registration office, the total deficiency in which is considered not to exceed 2 per cent. The result of this comparison is, that for the State of Massachusetts, excluding Boston, the deficiency in the enumerators' returns amounts to 26.42 per cent. of the whole number returned by them. For the State of New Jersey, the deficiency is 34.45 per cent. It may be considered certain that in no State is the deficiency in the enumerators' returns less than it is in Massachusetts.

The deficiency is greatest in the case of infants, of females, and of foreigners, and increases in a tolerably uniform ratio for each month going backwards in time from the date of taking the census. It is also greater in the more thinly settled sections of the country.

If we take the enumerators' returns, as corrected by the addition of cases obtained from physicians' registers, viz., 2,286 for Massachusetts, and 1,636 for New Jersey, the deficiencies thus corrected amount to 13.34 per cent. of the corrected returns for Massachusetts, and 20.14 per cent. for New Jersey.

If we suppose that after the addition of the 61,020 cases of deaths reported by physicians, to the returns of the enumerators, these last, excluding the States and cities above mentioned, are still deficient as much as 30 per cent, which is believed to be the maximum, the result will be an average mortality for the whole country of 18.2 per thousand of living population per annum. The actual mortality for the whole country, during the census year, was not less than 17, nor greater than 19 per thousand. This rate compares favorably with that of all other

civilized countries. The death-rate in the rural population of England, comprising ten and one-half millions of people, in the year 1880, was 18.5 per thousand. For the whole of England, for the same year, it was 20.5 per thousand. For Scotland, in 1878, it was 21.3 per thousand. In the mainland rural group of Scotland, for the same period, it was 17.3 per thousand.

The low death-rate in this country is considered to be due to the comparative absence of over-crowding, and the more general and equal distribution of the means of supporting life, including, especially, the abundant food supply of good quality for all classes of people.

The most valuable information furnished by the present census, in regard to the health of the country, is derived from those tables which show the relations of various causes of death to sex, age, and locality, since the conclusions which may be drawn from these are comparatively slightly affected by the deficiencies above referred to. The form of the Compendium does not admit the giving of these tables, which are extensive and elaborate; but a specimen of some of the deductions which may be obtained from them will be given by way of illustration.

COLOR.

In a population of 43,402,970 whites, there are recorded 640,191 deaths, giving a death-rate of 14.74 per thousand. In a population of 6,752,813 colored, there are recorded 116,702 deaths, giving a death-rate of 17.28 per thousand. Taking those States east of the Mississippi river which have the largest colored population, viz., Alabama, District of Columbia, Florida, Georgia, Kentucky, Maryland, Mississippi, North and South Carolina, Tennessee, Virginia, and Louisiana (including that part west of the river), we find that the total white population is 8,053,962, and the number of deaths recorded is 113,110, giving a death-rate of 14.04 per thousand. The colored population of the same States is 5,303,267, and the number of deaths among these reported 91,328, giving a death-rate of 17.22 per thousand. It is in this section of country that the deficiencies in the enumerators' returns of deaths are probably the greatest, and they are also probably greater among the colored than among the white population. The difference in mortality between the white and colored is especially well marked in the Southern States, and is largely due to the extensive number of deaths among infants in the colored population.

SEX.

Of the total number of deaths reported, 391,960 were of males, and 364,933 were of females, the total living population being 25,518,820 males and 24,636,963 females. For every thousand deaths of females, there were 1,074 of males. These figures give a male death-rate of 15.35 per thousand, and a female death-rate of 14.81 per thousand. It should be borne in mind, however, that the proportion of female to male deaths is somewhat greater than these figures would indicate.

AGE.

Of the 390,644 deaths of males in which the ages are recorded, 96,894 occurred under one year of age, and 163,880 under five years of age. Of 363,874 deaths of females of which the ages are recorded, 78,372 were under one year of age and 138,926 under five years of age. The proportion of deaths of males under one year of age to all deaths recorded was 248.03 per thousand; of those under five years of age, it was 419.51 per thousand. The proportion of deaths of females under one year of age to those of all ages recorded, was 215.38 per thousand; of those under five years of age it was 381.85 per thousand. The proportion to all deaths of which the ages are recorded of deaths of persons from five to fifteen years of age was 87.57 per thousand; from fifteen to sixty years of age it was 299.66 per thousand and over sixty years of age it was 172.40 per thousand.

CAUSES.

Of the total number of deaths, the causes of death were either not reported at all, or so reported as to be necessarily classed as unknown, in 23,129 cases, leaving a total of 733,764 cases of death in which the causes are distinguished. It is believed that the causes of death have been obtained much more accurately than in any preceding census, owing to the very general aid and coöperation of the physicians of the country in revising and correcting the enumerators' returns with reference to this point. To illustrate some points brought out in the tabulations which have been made, the following figures are given with regard to a few special causes of death.

Diphtheria.—The number of cases of deaths reported as due to diphtheria is, males, 18,849; females, 19,549; total, 38,398; giving a proportion of 51.33 per thousand of all deaths in which the causes are reported. The total number of deaths from diphtheria under one year of age was 2,896; under five years of age it was 20,035; between five and fifteen years of age, 16,162. In table Aa is given the number of deaths from this disease in each State Group of Counties in the United States.

In Grand Group I. (North Atlantic region), the proportion of deaths from diphtheria to the total number of deaths having recorded causes, was 51.29 per thousand, being in the cities (New Haven, Boston, Cambridge, Fall River, Lawrence, Lowell, Lynn, and Providence) 46.71 per thousand, and in the remainder of the group, including the smaller towns and rural districts 53 80 per thousand.

In Grand Group IV. (the Gulf Coast), the proportion of deaths from diphtheria was 12.16 per thousand, being in the city of New Orleans 13.74, and in the remainder of the group 12.27 per thousand.

In Grand Group VII. (being the Lake region), the proportion of deaths from diphtheria was 81.15 of all deaths reported, being in the cities (Chicago, Milwaukee, Detroit, Cleveland, Buffalo, Rochester, and Toledo) 78.15 and in the remainder of the group, 84.10 per thousand.

Enteric Fever.—The total number of deaths from enteric (typhoid) fever reported are: males, 11,852; females, 11,053; total, 22,905, being in the proportion of 31.21 per thousand of all deaths having reported causes. The total number of deaths from this disease, under one year of age, was 654; under five years, 2,707; from five to fifteen years, 3,952; from fifteen to sixty years, 13,945; over sixty years of age, 2,248.

In Grand Group I. (the north Atlantic region), the proportion of deaths from enteric fever to the total number of deaths having recorded causes, was 18.64 per thousand, being in the large cities (for list of which see above) 16.26, and in the smaller towns and rural districts, 19.95 per thousand.

In Grand Group IV. (the Gulf coast), the proportion of deaths from this disease was 22.01 per thousand, being in the city of New Orleans 7.67, and in the remaining portion of the group 30.02 per thousand.

In Grand Group VII. (being the Lake region), the proportion of deaths from this disease was 22.28 per thousand of all deaths reported, being in the large cities 17.16, and in the remainder of the group 27.31 per thousand.

It will be seen from these figures that neither diphtheria nor enteric fever are especially diseases of the large cities. They appear to be more prevalent in the small towns and rural districts which have no general water supply or systems of sewerage, but obtain their water from springs and wells, and observe the usual custom of storing excreta in cesspools or vaults.

Malarial Fever.—The total number of deaths reported as due to malarial fevers is: males, 10,276; females, 9,985; total, 20,261, giving a proportion of 27.61 per thousand of all deaths from reported causes.

The total number of deaths from these fevers, under one year of age, was 2,002; under five years, 6,182; from five to fifteen years, 3,482; from fifteen to sixty years, 7,909; sixty years and over, 26.23.

In Grand Group I. (north Atlantic region), the proportion of deaths from malarial fever to all deaths recorded, was 4.56 per thousand, being in the cities 3.02, and in the remainder of the gronp 5.40 per thousand.

In Grand Group IV., the proportion of deaths from this disease was 65.85 per thousand, being in the city of New Orleans 44.81, and in the remaining portion of the group 77.61 per thousand.

In Grand Group VII. (the Lake region), the proportion of deaths from these fevers was 9.74 per thousand, being for the large cities 8.27, and for the remainder of the group, 11.88 per thousand.

Consumption.—This is the cause of death to which the greatest number of cases are referred in the records, there being reported 40,619 males and 50,932 females as dying of this disease, giving a proportion of 124.76 per thousand of all deaths having reported causes, or a little over 12 per cent. Taking the same groups used above, we find that in Grand Group I., in the cities, consumption caused 150.55 per thousand of all cases of reported deaths, and in the remainder of the group 172.77 per thousand, giving an average of 164.89 per thousand.

In Grand Group IV., it caused, in New Orleans, 152.11 per thousand, and in the remainder of the group 97.66 per thousand, the average being 117.18 per thousand.

In Grand Group VII., it caused in the cities 97.66, and in the rural districts 130.22 per thousand, giving an average of 114.08 per thousand.

It will be seen from these figures that in the North Atlantic and Lake regions, the mortality from consumption is highest in the small towns and rural districts, while on the Gulf Coast the mortality is greatest in the city of New Orleans, in which it is higher than in the northern cities. This is probably due to the fact that New Orleans is not sewered or drained as are the northern cities, and has the soil water very near the surface.

The total number of deaths reported as due to accidents and injuries was 35,932, divided as follows: burns and scalds, 4,786; drowned, 4,320; exposure and neglect, 1,299; gunshot wounds, 2,289; homicide, 1,336; infanticide, 40; injuries by machinery, 120; railroad accidents, 2,349; suffocation, 2,339; suicide by shooting, 472; suicide by drowning, 155; suicide by poison, 340; other suicides, 1,550; sun-stroke, 557; other accidents and injuries, 13,980.

SOCIETY PROCEEDINGS.

THE NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, Nov. 16, 1882.

FORDYCE BARKER, M.D., LL D., PRESIDENT, IN THE CHAIR.

AFTER the reading of various reports, the scientific work of the evening was taken up. This consisted of a paper by DR. P. ALBERT MORROW, entitled

EXCISION OF CHANCRE AS A MEANS OF ABORTING SYPHILIS.

Dr. Morrow asked the question, "Is it possible by excision of the initial lesion to destroy the syphilitic virus, and prevent infection of the general system?"

The views of Bell, Hunter, and Ricord, were referred to. They advocated the early destruction of the local sore. In fact, this practice was almost universal among syphilographers until a very recent date. In 1877 Anspitz first *excised* the initial lesion. Previous to that time it had been destroyed by caustics. Since that time numerous excisions have been made, and many apparent successes reported. In Germany the current opinion is largely in favor of this practice. In France it is by no means received with the same favor, and in England the operation has been practically ignored. In this country excision does not seem to have been often practised, and the general sentiment seems to have been averse to its adoption as a means of cure. Some, however, have expressed themselves as favoring it in certain cases.

The operation consisted in lifting up with a pair of forceps the indurated tissue, together with the area of healthy tissue immediately surrounding it, and cutting off the entire mass with a single sweep of the knife. The part is dressed with a compression bandage. The loss of tissue rarely occasions much deformity. Not

infrequently secondary induration occurs, which is the indication for another operation.

It is claimed that this operation is better than the destruction of the sore by caustics or the hot iron. Also, that this simple operation prevents the occurrence of constitutional syphilis in many cases; that if it does not prevent it, the virus is attenuated and in cases of failure it has been recommended as a local adjuvant, because the local lesion is converted into a simple sore, which heals kindly in a few days.

The indication for the operation is when the sore is located where it can be removed without destroying important structures. Obviously enough, the earlier it is performed the greater the chances for success. Some recommend excision of the involved glands, as well as the local sclerosis.

Now if the initial lesion be the local expression of a constitutional condition, it manifestly follows that its removal cannot modify the effects of the disease upon the general system. In experimenting, we are embarrassed at the outset by our absolute ignorance of the nature of the virus; we are concerned with its celerity rather than the course of its progress. The question is, whether generalization of the virus occurs. At first glance it would seem that the theory of excision was the correct one; that the virus being deposited, was powerless to proceed farther until time had elapsed for repose and proliferation; that after this there was gradual implication of the vessels until the nearest lymphatic glands were reached, when it invaded the entire organism.

This conception regards the chancre as a depot of virus. To excise the chancre is to suppress the source of contagion. Opposed to this theory of excision there are many facts. In the exanthematous diseases we have, as is generally believed, local symptoms only after a period of incubation. Vaccine virus produces local trouble after a certain period, which is evidence of the complete saturation of the system.

Glanders of the horse is analogous to syphilis. Other examples might be adduced to prove that there is no possibility of interfering with the course of the poison after inoculation. The evidence furnished by clinical experience was then formulated; it was claimed that there was no distinctive signs by which a syphilitic sore could be distinguished as such before induration had occurred. Of two hundred and twenty-two cases of excision, sixty were recorded as successes, or about twenty-five per cent. By success was meant the non-appearance of secondary accidents for a period of from four months to four years. A number of objections to the acceptance of reported successful cases of excision were then given.

The author's conclusions were:

First.—That the facts of clinical experience as well as the deductions from analogy and experiment were opposed to the local nature of chancre, upon which the practice of excision was based.

Second.—The practice of excision of chancre as a means of aborting syphilis is condemned by clinical results.

Third.—The sources of error are comprehended under doubtful diagnosis, insufficient observations, and *post-hoc* conclusions.

Fourth.—In cases where secondary accidents fail to appear after excision, there is no positive evidence that this immunity is due to the operation.

Fifth.—But there is no evidence that excision of chancre attenuates the syphilitic virus, or modifies the general symptoms.

Sixth.—That it cannot be recommended as a local adjuvant, since it is opposed to the practice of sound, conservative surgery.

DR. EDWARD L. KEYES was called upon by the chair to open the discussion, and in doing so he remarked that he had been very much entertained and instructed by Dr. Morrow's paper, and was glad to be able to express his entire approval of the views therein contained. He did not consider it detrimental to himself to acknowledge that there was very little more to be said upon the subject owing to the great industry that the author had displayed in collecting so large an array of evidence. Syphilis, it seemed to him, was like a beautiful woman, in that it, like her, was *semper varum et mutabile.*

The syphilis with us at the present time was not the syphilis of the fifteenth century. It is mild in consequence of civilization. Syphilis among uncivilized people is as fierce, however, to-day as ever. In support of this statement Dr. Keyes read á letter from a graduate of one of the New York colleges, who is now resident in the Sandwich Islands, in which it was stated that upon the discovery of these Islands in 1779, by Captain Cook, they teemed with population, though the exact number of inhabitants was not known till forty years ago, when it was ascertained that there were 110,000 people. To-day, there are only 40,000 inhabitants. Before the visit of Captain Cook syphilis was unknown in these Islands, but since that time and up to the present day it has existed very generally, and in a very aggravated form, as the above statistics would seem to indicate. It was thus seen that syphilis, when implanted upon new fresh soil, was a virulent disease. Though syphilis in this city was generally very mild, still there was no safety nor certainty about it, for patients may die from it, or they may reach old age without experiencing any of its disagreeable features. This idea was supported by the fact brought forward by Dr. Morrow, namely, that though a patient may have undoubted syphilis, the case may go on in the mildest way with very little treatment It was the animus of the great originator of the operation of excision of chancre that first directed the speaker's attention seriously to the subject. Anspitz, in putting his views before the world thirty or more years ago, failed to recognize the work which had previously been done by others. Again, it was well known that he was a unicist. He paid very little, if any, attention to confrontation. The period of incubation was not noted with care. The only thing he depended upon was the initial sclerosis, and this was decided by the microscope. Now, microscopists did not agree as to the exact appearance of the initial lesion. It had been the speaker's experience that syphilis could be as severe as possible, and that without any hardness of the initial sore. Whether or not the microscope would reveal the evidence of specific virus before hardness had taken place, he did not know. The outcome of all experimentation is that the majority of cases have turned out to be failures. Dr. Keyes had not practised excision in a single case, but had offered to perform the operation of excision in every case where the location of the chancre would justify such a procedure. He had, however, at the same time told the patient that he could not certainly promise any benefit in the way of curing or aborting the disease, and as the patient had not requested the operation to be performed, he had had no experience with it. He thought that the evidence brought forward in Dr. Morrow's paper had settled the question of the worthlessness of the operation, and should strengthen the profession in looking upon it with more disfavor as an unnecessary procedure.

DR. E. B. BRONSON remarked that his personal experience with excision had been very meagre. In a few instances he had excised what he regarded as an initial lesion. These cases were under observation, however, only a short time. The operation was feasible in that it was easily performed, and the wound

healed kindly. So far as he knew in the cases that had come under his observation, there had been no subsequent development of the disease. It seemed to him, however, that the operation was an illogical one, for the syphilitic virus must needs have had time to have passed into the general circulation before the lapse of the time between the exposure of the patient and the appearance of the initial lesion. He had been very much interested in the paper, and heartily concurred in the views therein expressed.

DR. GEORGE H. FOX wished to express his admiration of Dr. Morrow's paper. Although he differed from the author in some minor points, on the whole he agreed with him. He could only recall two cases in which he had performed the operation of excision. In one he circumcised the patient at the same that he excised the chancre. No symptoms of syphilis followed. In another case symptoms of syphilis followed the operation, although they were perhaps somewhat milder than in average cases of syphilis. He was inclined to think that chancre is a local lesion, and for this theoretical reason excision should result favorably. At the same time he was fully aware that clinical facts did not bear out this opinion. Practically the operation failed to accomplish what was hoped for, and hence could not be recommended as a measure of treatment. Dr. Morrow had mentioned the elements of error entering into the statistics which had been collected in favor of the operation. One of these was the impossibility of making a positive diagnosis of chancre in every case. He believed, as Dr. Keyes had remarked, that syphilis was a mild affection. He thought that the general opinion of physicians was not in accordance with this view. They were in the habit of considering the disease as of a virulent nature. He could hardly believe that syphilis as it existed three or four centuries ago was more severe than at the present time. He was inclined to think that the reports then made were very naturally made up of selected cases presenting the more striking features of the disease. We meet with severe cases of syphilis in our hospitals, but as it occurred in private practice it was certainly of a mild character in the majority of cases, for the disease ran its course as a rule without injuring the health of the patient in any appreciable degree, and many cases got well without any treatment whatever, the patients living long lives and dying of old age if not from some other disease.

DR. F. R. STURGIS begged to supplement the objections brought forward by Dr. Morrow against accepting the statistics in favor of excision. In the cases reported adenitis was not spoken of. Now he believed that adenitis was generally recognized as being pretty sure to come on, if not at the time, at least a short time after the appearance of the chancre. A great many of Anspitz's cases were operated upon after six, eight, ten, or twelve days of incubation. One of the authors quoted in the paper reported only seven out of thirty cases of excision as successes. This seemed to him a very small proportion. In the cases reported by Frenchmen adenitis was always present, and in these cases not a single success has been recorded in support of excision. This was in striking contrast with the reports of German syphilographers, and certainly leads us to believe that there must be some error in the latter statistics. A practical point in considering the statistics of Anspitz which the author of the paper had adduced, was that he was a unicist. In this country very few experiments bearing upon excision had been made. He had only seen four cases where the operation had been performed, one of these was afterwards proven to be a chancroid. In another case, there was no subsequent induration; in all the others secondary induration followed. The absence of induration in any sore excised, must, of course, vitiate the diagnosis. Again, it was well known to those who had any familiarity with this class of cases that there were many instances of pseudo-hardness which might easily be mistaken for chancre.

DR. BULKLEY most heartily concurred with the views expressed in the paper theoretically and practically. His personal experience was limited to one case. In this instance, the chancre was thoroughly excised when the patient was first seen. Subsequently this proved to be one of the worst cases of syphilis that he had ever seen. While not believing in the prevention or abortion of syphilis by excision, there was a point which should be borne in mind in judging of the success of the cases presented in support of the operation. If one or two cases of actual syphilis are proven to have been cured by this means, the theory is in a measure proven. If it is found that by early excision of chancroid, they heal kindly and prevent subsequent destruction of tissue, the operation is of some value. It struck him that there might possibly be some value derived from the excision of all sores.

DR. R. W. TAYLOR said that he agreed with most that the author of the paper had said. He would not indulge in any theory, and his remarks would only have to do with hard facts. He agreed with Dr. Keyes in the benignity of syphilis provided we had an otherwise healthy subject, docile patient, and a good doctor. This doctrine he had taught for years. He had gone into the subject of excision of chancre quite fully and without any bias. He had waited to see the result of experimentation. When he wrote the section on venereal disease in connection with his late colleague and friend, Dr. Bumstead, he had excised fifteen chancres and for good reason. Sometimes, the chancre would be found upon the end of the prepuce, and would give rise to phimosis. Two procedures, under these circumstances, were open to the physician. One was to cut away the chancre or to excise it; the other to give mercury internally. The first method removed the sore with a single stroke, the other necessitated the commencement of treatment earlier than was desirable. Under circumstances like these, he considered it conservative surgery to excise the chancre. As early as 1869 he had excised his first chancre, and as above stated, by the time of the publication of his book had operated upon fifteen patients. But the disease came on subsequently. In three or four cases there was some enlargement of the glands. In two cases he was astonished at the length of the period of secondary incubation; namely, seventy-two days in one and seventy-nine or eighty days in the other. This observation was the means of keeping up his interest in the operation. He remembered an old time friend of his, in whom the first period of incubation was sixty days, of which he was satisfied. From that time, after having the chancre excised, it was seventy-two days before the disease made its appearance. The symptoms in this case were mild. The course of the disease, however, in the patient's wife, to whom he had communicated the disease, and who was of a tuberculous disposition, was severe and resulted in her death.

DR. TAYLOR recited the history of a case which he thought settled the question. The patient came to him showing a little excoriated papule not larger than the heads of four pins. It was red and slightly elevated. The patient was of a nervous temperament and very anxious about the sore. He stated that twenty days previous he had had connection and that he could submit the woman for examination. On the evening of the same day Dr. Taylor examined this woman, and found at the fourchette a small excoriation and a declining roseola on her body. Dr. Taylor stated the case to his patient, saying that the sore which he had

upon his penis was probably an initial lesion of syphilis which could be determined positively by letting it go on undisturbed. But the patient did not wish to let it go on, and, in accordance with his request, the sore was excised. Previous to the performance of the operation the penis was washed in a watery solution of carbolic acid. The sore was then touched with the pure acid so as to destroy its virus and prevent exudation into adjacent healthy tissues. It was then dusted with calomel, transfixed, and cut away together with an abundance of surrounding healthy tissue. The wound was allowed to heal by granulation, and in the course of ten days had closed nicely. No enlargement of the inguinal glands followed. Dr. Taylor wished, however, to state that he had seen cases of syphilis where the initial lesion was not excised, in which inguinal ganglia had escaped enlargement until a later period in the disease. This man had no enlargement of the inguinal gland, but at the end of forty five days he presented himself at the office, having taken a Russian bath the night previous, with a roseola coming out. As a prophylactic, he considered excision a failure.

DR. OTIS said that it was not his object in rising to speak to criticise the paper nor the experience of those physicians who had thus far spoken, but he wished to give his own experience and the views he entertained upon this subject. It seemed to him that in order to form an opinion of the desirability of excision of the initial lesion, it was necessary to inquire what the initial lesion is. He thought there was sufficient authority to enable us to say that the beginning of syphilis was an infected cell which could not be distinguished in any way from the white-blood corpuscles. We had a right to assume this from the fact that the first condition which we recognize at the point of lesion is a proliferation of cells. That these cells are not the result of an inflammatory aggregation of cells, but that they are the result of proliferation. Sufficient evidence existed to show that syphilis may go on through its entire course without any open lesion of any kind, the only observable condition being a small primary nodule. There must have been, however, an opening for the introduction of the syphilitic virus, but that this healed kindly was just as certain. In 1867, Biesiadecki made a careful microscopical examination of twenty specimens of Hunterian chancre, and found that there was in every case a proliferation of cells. He found the cells aggregated at the point of lesion to such an extent as to interfere with their own nutrition and secondarily the nutrition of the part. The lumen of vessels became packed with cells as well as the lymph spaces, and this packing of cells resulted in the interference with the processes of nutrition to the extent of causing a superficial exfoliation and breaking down of tissue, thus making an open sore. It was further found in examining the lymphatic vessels proceeding from this point, that those vessels were packed with cells and successively so throughout the line of the lymphatic vessels. There was no such general invasion of the patient with infection, as might have been supposed. Twenty, thirty, forty days would elapse from the time of exposure to the appearance of the initial lesion. This process of cell proliferation had gone on until it reached the lymphatic glands and through a period of at least six weeks in the majority of cases before any general evidence of the disease had manifested itself. This first period had been termed the period of incubation. All authorities had found the same condition, namely, the accumulation of cells first at a certain point and afterwards, at the end of a period varying from four to five and six weeks, there has been a general manifestation of syphilis in the shape of roseola eruption. Now, during all this time there has been nothing external or internal to show that the disease was present, and this fact is strong evidence of the local nature of the disease. Now, when we talk about excision of chancre with a view of arresting the disease, we know with what we have to deal. We have a proliferation of cells at a particular point. It depends upon the rapidity with which these contagion-bearing cells are enabled to get away from this point, whether we can prevent the disease from going into the general system. If we can take it early enough, the speaker believed that it was possible to prevent the occurrence of subsequent syphilis by excision. If the glands were involved, we could hardly hope to profit largely by the operation except by excision of the glands. As to affording relief from constitutional infection, this matter must always be a question of circumstances. It must vary in various instances. It might move with great rapidity from the surface through the lymph spaces into the lymph vessels—that is, from the surface towards the glands.

As to the practical results in at least fifteen, perhaps twenty, cases of excision which had been performed by the speaker, he would say that very great benefit has accrued from the operation as a matter of personal convenience in a number of cases. In illustration of this statement, the following case was cited. A patient came into the speaker's office, a number of years ago, with a very large initial lesion of syphilis upon his penis. He said he had been under treatment between two and three months, and that the sore was still increasing. He had just received a telegram to the effect that his wife was about to return home from Europe, and would probably reach him in the course of ten or twelve days. As a means of speedy relief, excision was advised and readily consented to. On the third day after the operation the wound had entirely healed by first intention, and when his wife reached home there was only a small line to indicate the seat of the former sore, which was a source of much satisfaction to the patient. As to the operation destroying much tissue, he wished to state in the first place that such was not the case, for the tissue which was removed was superfluous tissue. Hence the removal of the disease did not cause much, if any, deformity. In a number of cases operated upon he had found some difficulty some months afterwards in determining the exact seat of the former lesion, even in cases where the part excised was as large as the end of his thumb. While he would not claim it very strenuously, it had seemed to him that in the cases he had operated upon, the subsequent manifestations of the disease were milder than usual. This was the impression made upon his mind from his personal experience. He had not observed any tertiary manifestations of the disease in the patients operated upon. While appreciating the possible benefits to be derived from excision of the initial lesion he would never expect to have this take the place of legitimate treatment.

DR. OTIS said that some two years ago he had an opportunity to practise excision of an erroded papule on a worthy member of our profession. Some months afterwards he came into the office stating that at the time of the excision of the initial lesion he was of the opinion he must have syphilis. He stated that he knew he had syphilis, for he had just seen the young lady with whom he had connection, and she now had a papuli syphili. He was perfectly confident that he did not now have syphilis, and he wanted to claim for the operation of excision the curability of syphilis. He stated that he was now entirely free from syphilis, but that the woman with whom he had had connection before the excision of the sore had syphilis. Dr. Otis, however, was not so easily satisfied and submitted the patient to a thorough examination, the result of which was the recognition of the fact that he had inguinal enlargement on both sides; inspection of the throat

revealed a condition of comparative health, though there was some redness. Upon drawing aside the tongue with the spatula, a mucous patch was disclosed. The patient went under a course of constitutional treatment, which had just now been ended after a period of nearly two years. This case would have been very readily taken as an example of proof of the benefit of excision, had not much care been taken.

As to the non-malignancy of syphilis he was not at all convinced; on the contrary, he thought that in the wards of our hospitals could be found many cases illustrating the great virulence of the disease.

In private practice the mildness of the cases was in consequence of the judicious treatment which they received at the hands of physicians. He thought that the general intelligence of the profession was very excellent regarding the treatment of syphilis.

The discussion was closed by a few remarks by Dr. Morrow.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, October 9, 1882.

THE PRESIDENT, DR. JAMES TYSON, IN THE CHAIR.

MYXOMATOUS TUMOR OF THE POSTERIOR CERVICAL REGION,

presented by DR. NANCREDE, for Dr. W. G. MacConnell.

The tumor was removed by Dr. J. H. Brinton, at the Jefferson College Hospital Clinic, some ten days since. The patient was a little boy aged four years, whose parents had first noticed the growth about two years ago. Latterly, it has grown with considerable rapidity. It was of firm consistence, lobulated, and movable beneath the skin, giving the impression that it was a fibrous tumor. After removal, in addition to the above-mentioned characteristics, it was found surrounded by a capsule, and on section looked somewhat suggestive of myxoma, still it was thought by some to be merely a fatty tumor containing more fibrous tissue than usual.

Microscopic Examination (by Dr. MacConnell).—Upon examining a frozen section stained with iodine, meshes of capillaries are seen displayed, in the walls of which the endothelial cells composing the vessels can be distinctly seen. The aforesaid meshes contain the mucoid structure traversed by large pale fusiform cells, the processes of which anastomose with each other. In addition, many leucocytes are seen, and interspersing the growth in every direction numerous yellow elastic fibres are readily distinguished.

When presenting this specimen Dr. Nancrede commented on the rarity of such growths.

DR. S. W. GROSS said he had himself presented several gelatinous polypi of the nose, a number of years ago, which were most characteristic examples of myxomatous tissue. He could also recall a specimen of subcutaneous myxoma of the forearm, as well as the hæmatoid myxoma of the breast referred to by DR. Nancrede. He was disposed to consider it the rarest of all neoplasms of the breast; indeed, he had never personally met with one, and when preparing his work on tumors of the breast, he had written to numerous surgeons throughout the country, who all replied that they had never met with one affecting the breast.

DR. FORMAD remarked that he had exhibited a myxomatous fibroma of the labium some years since, and said that the peculiar milky appearance assumed by the fluid, when such growths were thrown into alcohol, was a good diagnostic point.

DR. SHAKESPEARE said that his personal experience as to the rarity coincided with that of Dr. Gross. This specimen is one of the rarest forms, as most of the fibrillæ consist of yellow elastic tissue. The rarity of myxomatous tumors seems to him to have much bearing on the views of Cohnheim and others as to the etiology of tumors. The observers insist that all tumors spring from the remains of fœtal tissues, not made use of in tissue construction, which remain dormant in their embryonal condition until subjected to some irritation, when they develop into the various neoplasms. New tissue, practically identical with that found in myxomata, pervades the fœtus. How then is it that portions of this do not remain to give rise to myxomata? On the contrary, myxomata are among the rarest of the neoplasms.

SPECIMENS FROM A MAN WHO DIED WITH BRAIN, LUNG, HEART, LIVER, SPLEEN, KIDNEY, AND BLADDER LESIONS,

were presented by DR. J. F. T. ESKRIDGE.

The specimens showing the above lesions were removed from the body of a man, aged 68 years. The patient had become deaf in the right ear thirty years before, while suffering from some brain disturbance. Attacks of jaundice, with gradually increasing permanent discoloration of the skin, had extended over a period of ten years. Since the early part of the year 1877 he had complained of incontinence of urine, an oppressed feeling over the hepatic region, dropsy in the feet and face, and a gradual loss of flesh and strength. The two years preceding his death he had been unable to work, but was only confined to bed five days. During the latter period his symptoms were, in the order in which they were developed, great prostration, scanty secretion of urine, blindness for twenty-four hours preceding repeated convulsions, loss of speech, and almost total inability to swallow, although consciousness was preserved until coma ushered in the death scene. His temperature (axillary) did not rise above 100.5°. The surface head temperature nearly equalled that of the axilla. No paralysis of the muscles of the face or extremities preceded death. The liver during life did not appear to be enlarged or altered in its outline.

The *post-mortem examination* revealed in the brain engorgement of the veins, with some effusion, slight pia-mater inflammation in the neighborhood of the fissure of Rolando, apparent degenerative changes in the left island of Reil and anterior portion of the left temporo-sphenoidal lobe; in the pleura and lungs, old and numerous pleuritic adhesions, lobular and vesicular emphysema of the lungs, congestion of both lower lobes, and a nodule (probably cancerous) of the left apex; in the heart, fatty degeneration, dilated right ventricle, and incompetent mitral valves from ossific change; in the liver, multiple cancer without an increase in size or a nodular condition of the organ; in the spleen, marked increase of fibrous tissue and atrophy of the gland to one-half or less its normal size; in the kidneys and ureters, the last stages of pyo-nephrosis, the glandular tissue being nearly all destroyed, the pelves were as large as a good-sized orange, and the ureters dilated so as to admit a man's thumb; in the bladder, great hypertrophy of the mucous membrane and decrease of the capacity of the viscus.

PRIMARY CARCINOMA OF PANCREAS AND LIVER.

Presented by DR. E. T. BRUEN.—The interesting features pertaining to this case are the age of the patient—24 years, and the rapidity of the abnormal processes. These rendered the diagnosis of malignant diseases doubtful until the appearance of nodular tumors in the liver. The family history was free from hereditary disease. The commencement of the disease dated from September 1, 1881; death occurred on the 15th of January, 1882. At first the symptoms related solely to the digestive tract, such as dull and

heavy sensation after eating with acid eructation and occasional vomiting. Subsequently sharp, cramp-like pains in the abdomen were a prominent symptom. After the lapse of a week there commenced general itching, and two week later the skin became yellow. This yellowness and itching never disappeared during the history of the case. At the autopsy the gall-duct was obstructed by the enlarged head of the pancreas, so that extreme dilatation of the gall-bladder had ensued. This was probably the cause of the jaundice and not the liver disease itself. The bowels were regular and the appetite good when first seen. The case then presented evidences of partial obstruction of the gall-duct with digestive disorder, but without the symptoms characteristic of malignant disease of the stomach or bowels. By the middle of December, 1881, the liver dulness extended from the fourth interspace to three inches below the ribs in the upper nipple line; from the ensiform cartilage the line of dulness extended to within one inch of the umbilicus. The hepatic region was tender on pressure, especially over the epigastrium. The patient complained about this time of dull pain over the liver, with griping pain in the abdomen. The pulse was 76 per minute. He had lost four pounds since admission and looked thin. About this time a small inequality was noticed in the surface of the liver three inches above and a little to the inner side of the umbilicus. Tho spleen was enlarged. By January 7th, the bossillation of the liver became distinct and the enlarged gall bladder, rendered irregular by gall-stones, presented a slowly increasing, elastic, tender tumor, situated to the right of the epigastrium and umbilicus. By Januray 12th, the pulse became rapid—130 per minute; the patient rapidly failed and death occurred January 15th.

Au'opsy.—The pancreas was enlarged to double its size, the growth chiefly occupying its head and compressing the common bile-duct. Microscopic examination showed it to be scirrhous carcinoma. The liver was thickly studded with nodules of medullary carcinoma, explaining the *ante-mortem* bossillated feel of the organ. The gall-bladder was distended to twice its normal size and contained a number of gall-stones.

Remarks.—The duodenal end of the organ, as is usual, was the seat of the disease. In a paper on 39 cases of primary carcinoma of the pancreas in St. Bartholomew's Hospital Report for 1881, jaundice is stated to be always present, while in 24 cases of secondary carcinoma this symptom was noted in but seven cases. This is presumably from the secondary growth occurring in some other portion of the organ than its head. Murchison says that the characteristic symptoms of carcinoma of the pancreas are, pain in the pancreatic region, sensible tumors, and persistent jaundice. To these Dr. Bruen would add, intestinal dyspepsia, which differs in some essential features from the dyspepsia of organic disease of the stomach.

DR. MUSSER remarked that he could vouch for there being a distinct tumor of the pancreas, as he was present at the autopsy. The case had been under his observation in the dispensary one month prior to admission to the hospital. On account of the age he was puzzled as to an exact diagnosis, although confident that the cause of the jaundice was obstruction. He noted among other symptoms the intense itching of the skin, a point of importance, Sims says, in the diagnosis of obstructive jaundice from that due to suppression. Of five cases of tumor of the pancreas he had lately seen, all were accompanied by jaundice.

DR. BRUEN called attention to the uncertainty of bossillation as a symptom of malignant disease of the liver. He had presented to this Society only two weeks since a liver exemplifying this condition in a marked degree, where nothing beyond cirrhosis in the stage of enlargement existed. The occurrence of carcinoma of the liver at so early an age is unusual, although Dr. Pepper had shown a specimen of the disease to this Society some years ago, occurring in an infant.

The PRESIDENT said that there were two points in this case of great interest to him: firstly, jaundice in carcinoma of the pancreas, while it is a frequent symptom, it is by no means an invariable symptom. Seven years ago he presented to this Society the specimens from a case of primary pancreatic carcinoma, where no jaundice had been present, and six months ago he presented to the Society a specimen of enlargement of the head of the pancreas from a patient who also presented no symptoms of jaundice. Secondly, as to the diagnosis from cancer of the stomach, he had noted in his experience, as was mentioned in the history of Dr. Bruen's case, the absence of gastric symptoms. This negative symptom is of importance, since the tumor is often detected in precisely the same spot in both these diseases. The absence of gastric symptoms with intestinal indigestion, irrespective of fatty diarrhœa, he considered the most reliable diagnostic points between carcinoma of the pancreas and stomach.

SPINDLE-CELLED SARCOMA OF THE SMALL INTESTINE,

presented by DR. W. A. EDWARDS.

On September 23, 1882, I was asked to assist Dr. W. F. Atlee in the removal of an abdominal tumor. The patient, æt. 48 years, whose menstruation had ceased at 31 years, first noticed the swelling in April last. On the day of operation she measured thirty-eight inches around the abdomen. The usual incision was made, and the tumor reached, when its surface was seen to be of a dark purple hue, with a network layer of veins, ramifying in every part of its serous covering. A trocar and canula were introduced, but nothing but blood followed the withdrawal of the trocar. The sac was then torn open, and its contents of a soft brain-like consistence were emptied out. The growth was now turned out of the abdominal cavity. There was no distinct pedicle, but an attachment to the intestine of about the size of a half dollar was seen. Dr. Atlee says, "when I emptied the sac of its soft contents I examined carefully, with *extreme care*, the part fastened to the intestine, and my fingers passed into the intestinal tube." A silk cord was tied around the attached portion, and the remainder of the growth removed. The omentum was attached to the growth for a space of two inches; this was ligated and cut away, and the abdominal wound was closed, etc. Death occurred on September 25, at 4 A.M.

This growth sprang primarily from the submucous tissue of the small intestine, and grew with great rapidity as the patient was only aware of its presence last April, and by September she measured, as above stated, thirty-eight inches. *Microscopical* examination of preparations, taken from several portions of the growth, clearly show it to be a spindle-celled sarcoma, and a most typical one at that. The small intestine is an unusual site for this neoplasm. As far as I am able to ascertain there is no recorded instance of its occurrence in this situation. My friend, Dr. Formad, to whom I have shown the growth, concurs with me in this statement. On the day of operation I noted, as well as I could, the absence of all secondary deposits. The surrounding intestines and peritoneum were apparently normal, not even unduly hyperæmic.

No post-mortem was permitted.

CHRONIC PARENCHYMATOUS NEPHRITIS COMPLICATING PHTHISIS PULMONALIS,

presented by DR. JAS. TYSON.

My object is showing these kidneys is to illustrate the morbid anatomy of the renal complications which

so frequently attends the later stages of phthisis pulmonalis. It is very well understood that when œdema of the feet and legs presents itself in cases of consumption the end is not far distant; but the renal complication which is at the bottom of such œdema is often overlooked. It is of course not impossible that there should be œdema in the last stages of phthisis, from simple alteration in the composition of the blood—a watery state of it—but in the majority of instances it means that the kidneys have become involved. As to the form of disease affecting the kidneys, it is acknowledged that it may be either lardaceous disease or chronic parenchymatous nephritis, but I think the impression prevails, it was at least my own until recently, that the amyloid kidney is the most frequent complication. I believe, however, that the chronic parenchymatous nephritis is more common, and it becomes a matter of interest, if not of importance, to be able to diagnose between these two conditions. It is well known that the microscopic and clinical characters of the urine in these two forms of kidney disease are often identical, so that no assistance is afforded by a study of the urine. The history of the case, of course, leads to neither particular form, but suggests both. One criterion only can I recall to aid us, and that is the presence of enlarged liver. So commonly associated is the enlarged amyloid liver with amyloid kidney, that the absence of it almost necessarily precludes the presence of amyloid kidney. At least I am sure we would err less frequently if we were to consider all cases of renal disease attending consumption unattended by enlarged liver to be parenchymatous nephritis rather than lardaceous disease. It is true we often have enlarged fatty liver in consumption, but the degree of enlargement never reaches that of amyloid liver, and hereafter I shall be inclined to consider all cases of renal disease complicating consumption to be parenchymatous nephritis unless they are associated with enlarged liver, when I shall conclude that they are instances of amyloid disease.

Dr. Bruen considered that the passage of large quantities of urine, and the history of specific disease or of prolonged suppuration preceding the kidney trouble would warrant a diagnosis of amyloid renal disease.

DR. MUSSER would ask whether the heart was hypertrophied, and what was Dr. Tyson's experience regarding hypertrophy of that organ in cases of amyloid disease and of chronic tubal inflammation of the kidneys. If not too late, he would like to call attention to the absence of cardiac hypertrophy with an infinite degree of obstruction in the renal circulation in the case Dr. Eskridge had presented. This is in direct opposition to the view held by some that the hypertrophy of the heart is a sequence of the renal obstruction in chronic interstitial nephritis.

DR. TYSON replied, that in this particular instance he did not see the heart and could not tell whether it was hypertrophied or not. The same law holds good for amyloid kidney, as for chronic nephritis; if the case last long enough, hypertrophy is sure to be found sooner or later.

ECCHYMOSES OF THE MUCOUS MEMBRANE OF THE STOMACH,

presented by DR. J. M. BARTON.

The history of the case was that of chronic lung trouble. The stomach upon being opened presented an irregularly shaped extravasation of blood about two-thirds of an inch in diameter. The mucous membrane covering the effusion was healthy, as it was in the rest of its extent.

DR. TYSON remarked that these effusions are not uncommon, but he has never seen them except in their pin-point form.

DR. ROBERTS asked if there had been violent vomiting recently.

DR. BARTON replied that nothing of this sort had been observed for some months prior to death.

CORRESPONDENCE.

SEWER-TRAPS.

To the Editor of THE MEDICAL NEWS.

SIR: In reply to your late strictures upon my paper entitled, "Why Sewer-traps are Unreliable," etc., I hope you will permit me to explain briefly: 1. That when speaking of traps emptying by evaporation, siphonage, etc., I was not so stupid as to deny such occurrences, but only sufficiently so to dispute their importance, if, as I believe, new depots for the reproduction of disease germs frequently form inside these boasted safeguards. 2. That, although reporting observations on three traps only, I too often quote to students the aphorism that "no one fact, and, indeed, no ten facts, prove anything in medicine," to fall into the error of limited experiment you impute to me. Before my paper was published, I learned from practical plumbers that a slimy lining, such as I described, is a common and troublesome intruder into ball, S, and D traps, and the usual denizen of sewers. 3. Your statement that the vegetable growth I examined was entirely different from that which characterizes the development of those microzymes which are capable of causing disease, because it consisted of creeping threads, "whereas the germs which we know anything about are minute particles or single cells," could only have proceeded from a want of personal acquaintance with the subject, since it is notorious (among microscopists) that the diseases of *Favus* and *Herpes circinatus* are caused by spores and mycelia (creeping threads) of the achorion and microsporon *intruding* among the epithelial cells of the hair and skin. Finally, it seems to me that your assertion, "The gases of sewers do not cause any specific disease," is *very bad for the facts* I have quoted from Thursfield, Keating, Chamberlin, and Wilson, and which are recorded by a host of medical and sanitary authorities.

Very respectfully yours,

JOS. G. RICHARDSON.

3238 CHESTNUT ST., PHILADELPHIA, Nov. 16, 1882.

[The fact that Dr. Richardson found a fungous growth in a ball trap proves nothing with regard to an S trap, which is the trap commonly used and recommended. The production of *specific* diseases by sewers is not due to the gases but to particulate germs. The essential point is, has Dr. Richardson presented any evidence that a fungoid growth has ever been known to creep from a soil-pipe through an S trap to the house side? It is our opinion that he has not and that there is no foundation for his sweeping generalization that the theories held by most, if not all, sanitarians and sanitary engineers may be relinquished.—ED.]

NEWS ITEMS.

BROOKLYN.

(*From Our Special Correspondent.*)

THE MEDICAL SOCIETY OF THE COUNTY OF KING'S AND THE NEW YORK CODE.—At the stated monthly meeting of the King's County Medical Society held last Tuesday evening, the special order of business was the consideration of Dr. Squibb's resolutions offered at the preceding meeting (see THE MEDICAL NEWS for November 4, page 530). The meeting was very largely

attended, and the resolutions of Dr. Squibb were adopted on a vote taken by ballot. The effect of the vote is to instruct the County Society's delegates to the State Society to vote in the interest of the old Code.

PROGRESS OF THE YELLOW FEVER.—Official yellow fever reports have been received at the office of the Surgeon-General U. S. Marine Hospital Service to include the 10th of November, showing that only six cases and one death have occurred at *Brownsville* since the last weekly report. This makes a total of 2006 cases and 15 deaths since the disease appeared at that place. One case appeared at Point Isabel, Texas, on the 4th inst. The weather is reported hot and calm.

The *Cordon Sanitaire* thirty miles above Brownsville, known as the "Arroyo Cordon," was removed on the 10th inst.; but the river guards in Hidalgo and Starr Counties bordering the Rio Grande are continued, owing to the prevalence of the disease in Mexican towns confronting those counties. Dispatches state that people returning to Mier and Camargo, in Mexico, are falling victims to the disease, 11 deaths at the former and 7 deaths at the latter place having occurred on the 2d and 3d of November.

The yellow fever epidemic in *Pensacola, Florida*, is happily at an end, although no official announcement to that effect has been made. During the past week ending November 20th, two telegraphic reports have been received at the office of the National Board of Health, one on the 14th stating that no new cases had been reported during the previous twenty-four hours, and the second on the 16th reporting 5 sporadic cases, but no deaths. Since then many suppose that there have been no new cases to report, else force of habit would have led the Secretary of the Pensacola Board to his telegraph book. The report on the 16th stated that there had been a frost during the three preceding nights.

DIPHTHERIA IN PHILADELPHIA.—The continued prevalence of diphtheria in Philadelphia has been the cause of considerable comment. Since 1876 the disease has not been so fatal as it is at the present time. In the former year there were 708 deaths from this disease; in the present year the records show that there have been 730 deaths up to November 18th, which number is already in excess of that of any previous year.

The mortality for the preceding eleven years was as follows:

1871, . .	145 deaths.	1877, . .	458 deaths.
1872, . .	150 "	1878, . .	464 "
1873, . .	110 "	1879, . .	321 "
1874, . .	179 "	1880, . .	323 "
1875, . .	652 "	1881, . .	457 "
1876, . .	708 "	1882(Nov.18),	730 "

For many years previous to 1875 the mortality from diphtheria was comparatively light, it never having exceeded 200 deaths in any one year. Going back to 1861, we find the deaths amounted to 502, which indicates a mortality relatively about as great as that of the present year. In 1875 there was a marked increase in the deaths from this cause, the number having been only twice exceeded in the past decade, namely, in 1876 and in 1882. Since 1876 there has been a gradual falling off in the annual number of deaths until 1881, when an increase again occurred, which has been particularly marked the present year.

The deaths by quarterly periods in 1882 have been as follows: 1st quarter, 174; 2d quarter, 163; 3d quarter, 215; from October 1st to November 18th, 178.

The disease has been more especially prevalent since the latter part of August. Since the week ending August 26th, the average weekly number of deaths has been about 23. In September there were 108 deaths; in October, 84; and in the first three weeks of November, 94. The total mortality for November will in all probability exceed that of any previous month.

It has been stated that the frequent and prolonged exposure of the people during the Bi-Centennial Celebration, held during the week ending October 21st, by acting as a predisposing cause, accounts for the present increase of the disease. While this may be to some extent true, it fails to explain the much greater mortality which occurred in the month of September.

The disease does not seem to depend on localized causes, for, while it is more prevalent in Frankford, and in wards in the northeastern part of the city, deaths are reported from many widely separated localities. It is almost entirely confined to children, the period between two and five years furnishing the greatest mortality. As a rule, this disease is most prominent in the first and last months of the year, and its increased prevalence at the present time, therefore, is no exception. Compared with other large cities, the mortality in Philadelphia is not excessive, New York having reported as many as forty-four deaths in one week during the present year.

TYPHOID FEVER IN PROVIDENCE, R. I.—In a communication to the Board of Aldermen, on November 16, the Superintendent of Health, Dr. Edwin M. Snow, makes a statement of the facts as known to him concerning the present outbreak of typhoid fever in the city, with the view of correcting the false and exaggerated rumors which are prevalent, and causing increasing alarm and uneasiness among the people.

During October the mortality returns did not show any unusual prevalence of the fever, as only eight deaths occurred from this cause during the month, or two less than during the preceding month. But four or five days before the end of October a sudden outbreak of the disease was observed in all parts of the city, as well as in neighboring towns, as East Providence and Seekonk, Mass., and the disease is still progressing. Dr. Snow has entire confidence in the purity of the Patuxet water, which forms the main supply of the city, and points in support of this opinion to the fact that the fever is more prevalent in proportion to population in East Providence and Seekonk than in Providence.

During the week ending November 4, 51 cases were reported, in the following week 163 cases, and during the four days to noon of November 16, 68 cases, making a total of 282 cases.

Dr. Snow thinks it probable that all the cases have not been reported, but is inclined to believe that the whole number does not exceed 400.

Of the whole number of cases, the comparative severity was reported as follows:

Mild, . . . 70 cases, or 24.8 per cent.
Average, . . 126 cases, or 44.7 per cent.
Severe, . . 36 cases, or 30.5 per cent.
None were reported malignant.

SCARLET FEVER IN COLUMBUS, O.—Dr. Doren, the Superintendent of the Institution for the Feeble-Minded in Columbus, makes the following statement to a *New York Herald* reporter about the spread of scarlet fever in the Institution: "Since the 10th inst., we have had fifty-eight cases. Three have died. One was very low this morning. The general character of the disease is mild, but it may extend to all the inmates who are liable to take it, as the Institution is crowded in consequence of the destruction of one of our buildings by fire on November 18, 1881. There is a new building nearing completion."

THE TYPHOID EPIDEMIC AT PARIS.—The rapid extension of the epidemic of typhoid fever in Paris is exciting considerable consternation, and well may do so. The mortality has increased fivefold in the course of three weeks; from 57 in one week to 134 in the next, and 250 in the third. The number of admissions into hospital has exhibited a corresponding increase, being 213 in the first, 536 in the second, 1001 in the third, while on October 19th, the various hospitals contained no less than 2136 cases. Since then a slight fall in the number of fresh cases has occurred, which, it is hoped, indicates the commencing decline in the epidemic. The epidemic is most severe in the northern quarters of Paris, the mortality at La Villette being five times as high as at Montrouge. Of 250 deaths in the last week, 42 were between the ages of five and fifteen, and 167 were between fifteen and twenty-five. It is conjectured that the extension of the disease may be connected with the return to Paris of many families, especially students and others, who have, during a holiday spent in the country, lost some of their acclimatization; but, on the other hand, it must be remembered that the present season of the year is that in which typhoid most frequently assumes an epidemic form. The circumstances of the outbreak, however, unquestionably deserve the most careful study, since its extent threatens to render it one of terrible proportions. It is remarkable as occurring in a season of much and persistent rain, in which the chance of the contamination of drinking-water is usually regarded as small.—*Lancet*, November 4, 1882.

QUARANTINE QUARRELS.—A difference of opinion as to the propriety of discontinuing quarantine regulations on November 1st, has given rise to a warm correspondence between the health authorities of Louisiana and Texas. The State Board of Health of Louisiana having ordered quarantine regulations to be suspended on that date, the health officer of Texas announced in a letter to Dr. Joseph Jones, President of the Louisiana Board, that the presence of yellow fever in Cuba, Pensacola, and along the western border of the State, had caused the governor to extend the quarantine until cold weather, and that as it would be useless for Texas to maintain a quarantine against infected places if New Orleans was open to them, the regulations would be enforced against that city if its quarantine was raised on November 1st, as suggested.

MR. A. PEARCE GOULD has just been elected Assistant Surgeon to Middlesex Hospital, London. Mr. Gould is favorably known in this country as the author of numerous contributions to surgical literature, the latest and most noteworthy of which is the elaborate paper read before the late International Medical Congress, on the rapid method of cure of external aneurism by means of the elastic bandage, with a table of 72 cases.

UNIVERSITY OF ABERDEEN.—DR. ALEX. OGSTON has been appointed to the Chair of Surgery in Aberdeen University.

BERLIN GYNECOLOGICAL CLINIC.—The new Berlin Gynecological Clinic was opened on October 18th. The occasion was celebrated by the presentation of an album containing the photographs of all the earlier directors and assistants.

THE ILLNESS OF SIR THOMAS WATSON.—The *British Medical Journal* gives the following account, by Mr. John Walters, physician in attendance, of the illness of Sir Thomas Watson, which will be read with a sad interest by his many admirers on this side of the Atlantic:

Sir T. Watson, now in his ninety-first year, had returned a few weeks ago from the seaside, and was staying with his son at Reigate Lodge, previously to returning to London for the winter, and was in the enjoyment of his usual good health. On Sunday afternoon (October 22d), after rising from his chair, he found he was unable to stand, and, inclining to the left, would have fallen if he had not received support from those at hand; subsequently, in trying to write a letter, he could not remember how to spell the simplest words.

On visiting him two hours after, I found him perfectly rational and collected. He said he could not explain his symptoms; he felt perfectly well, but could not stand without help; when he tried to do so, he fell over to the left side. The pupils were somewhat contracted, equal, and answered to the stimulus of light. Pulse 78, regular; arteries somewhat rigid and tortuous; heart-sounds very feeble, with a metallic ring over the aortic valves; extremities rather cold. There was no apparent paralysis, but the face was slightly flattened on the left side, and the tongue inclined somewhat to the left. He was able to walk up-stairs to bed with assistance. The urine was found afterwards to be alkaline, but contained no albumen. The temperature was subnormal. He passed a fair night. On the 25th he was seen by Dr. G. Johnson with me. His condition was much the same as when first seen, and he was able to take a fair amount of nourishment and some stimulant. On the 26th, after slight exertion, an alarming attack of dyspnœa came on, with coldness and lividity of the extremities. This passed off after the administration of some stimulant, and he walked to his bed-room with assistance.

On the 27th he took but little nourishment, and was much exhausted; he became drowsy towards evening, and his tongue dry and parched. As his condition seemed alarming, Dr. Greenhow was asked to see him with me. The next morning we found his condition much improved; the temperature normal: tongue moist, but coated with a white fur; the pulse 84, and regular. He had taken light nourishment, and slept for some hours; he was perfectly sensible, and had no further paralytic symptoms. Since this his condition has varied but little; and, on being visited by Dr. Johnson again on the 28th, he found him in just the same state as he was on the 27th. During the last few days, the pulse has gone down to about 60, regular, of fair quality; he has no obvious paralysis; the face and tongue remain as when first seized, except that the flattening of the left side of the face is more marked. The urine has become acid, and now contains a trace of albumen. The breathing is at times irregular when asleep, approaching the condition known as "Cheyne-Stokes'" respiration; the bowels have acted several times without assistance; and the urine is voided naturally. He only takes the lightest kind of nourishment, dozes a good deal, and usually sleeps several hours during the night. He has not been able to leave his bed since the attack on October 26th; he is easily roused if dozing, and his mind remains quite clear.

The opinion we have formed is that there is thrombosis of some of the smaller cerebral arteries on the right side (probably supplying the region of the parieto-occipital fissure). The prognosis is naturally grave.

HEALTH IN MICHIGAN.—Reports to the State Board of Health, for the week ending Nov. 11, 1882, indicate that puerperal fever, bronchitis, tonsillitis, cholera morbus, membranous croup, dysentery, and rheumatism, increased, and that erysipelas, typhoid fever, and typho-malarial fever, have decreased in area of prevalence.

Reports from sanitary inspectors, during the week

ending Nov. 11, mention three cases of measles found among immigrants arriving at Detroit.

Including reports by regular observers, and by others, diphtheria was reported present during the week ending Nov. 11, and since, at 25 places, scarlet fever at 19 places, measles at 4 places. Smallpox was reported at Grand Rapids Nov. 11.

OBITUARY RECORD.—Died, on November 20, in the forty-sixth year of his age, HENRY DRAPER, M.D., late Professor of Chemistry in the University of the City of New York.

Professor Henry Draper was a son of the late Dr. John William Draper, the eminent chemist and philosophical writer. He was born in Prince Edward County, Va., March 7, 1837. He graduated in the medical department of the University of New York in 1858, and in 1860 became Professor of Physiology and Analytical Chemistry there. Dr. Draper remained at his post in the Medical School until 1873, when he resigned the office, retaining, however, active relations with the Academic Department until last September. Together with the study of physiology he taught analytical chemistry for several years, taking the students after they had been two years in his father's class, where they had been carefully instructed in the elements of the science. After the death of his father, he was elected to fill his chair.

He published a "Text-Book of Chemistry" in 1864, and has been a frequent contributor to scientific periodicals, principally on astronomical, electrical, and photographic subjects. He has been most eminent as an astronomer. By means of a magnificent telescope at Hastings-on-the-Hudson—the grinding of the 28-inch object-glass of which occupied all his spare time for three years—and special spectroscopic and photographic apparatus of his own devising, Dr. Draper has been enabled to perform an extraordinary feat in spectroscopy—that of photographing a very large space of invisible lines in the ultra violet portion of the spectrum beyond the line H. He subsequently reproduced this appendage to the spectrum by the albertype process and published a pamphlet in regard to this very interesting subject, in which he gave the wave-lengths of all the principal lines. The pamphlet has attracted a great deal of attention among scientists in this country and in Europe, and it is considered one of the most remarkable contributions to the new and wonderful science of spectroscopy. He took an important part in the observation of the transit of Venus in 1874, and of the great solar eclipse of 1878.

The discovery of oxygen in the sun in 1877 was Professor Draper's greatest work. He published a paper on the subject, and had the photograph which he made of the oxygen line in the solar spectrum lithographed. His paper was translated and published in the German and French journals. The discovery met with much opposition abroad, and Professor Draper went over and explained the matter more fully. After he had convinced scientific men in London and Paris that his conclusions were based not on mere opinion, but on exhaustive experiments, he was received with great enthusiasm by them and his new theory of the solar spectrum was acknowledged to be the true one. He used in making this now famous discovery a Rutherfurd reflection grating of 17,296 lines to the inch. Mr. Lockyer suggested the use of such an instrument in observing a solar eclipse, but had been anticipated by Professor Draper, who had, several months before Mr. Lockyer's paper was presented to the Royal Society, constructed his phototelespectroscope.

The commissioners appointed by Congress to observe the transit of Venus on December 9, 1874, selected Professor Draper as the Superintendent of its Photographic Department. In this capacity he had such marked success that a gold medal was struck for him at the Philadelphia Mint, by order of Congress. The medal bears the following inscription in Latin: "He adds lustre to ancestral glory."

The cause of his death was pleurisy, and his illness was very brief, for as late as the Wednesday evening of last week he entertained the members of the National Academy of Sciences, over fifty in number, at a dinner given at his house. He had felt slightly unwell in the evening, and at the table those near him observed before the dinner was over that he was in pain. He made light of it, however, and said that a hot bath would soon bring him out all right again. But it did not, and shortly after midnight a physician was summoned. Acute pains in his chest continued with increasing severity until he died, on Monday morning at ten minutes before 4 o'clock. His sufferings were very great, and much of the time he was kept under the influence of morphia on account of the excruciating pain. He realized that he might die from the attack early, but he did not entirely give up hope of recovery until Sunday night, when he said to Dr. Metcalf, his physician: "Well, I've fought bravely, but they've got the best of me. I must go." Shortly after this he died. It is believed by his physicians that he brought back the seeds of the disease in a bad cold contracted on his last visit to the Rocky Mountains and that the state of his system was such as to make the end almost certain from the beginning.

—— DR. DANIEL W. CULYER, a prominent practitioner of Jersey City, dropped dead while hunting near Deckertown, N. J., on November 15th. The cause is supposed to have been cardiac disease.

—— On Nov. 1st, GEORGE CRITCHETT, F.R.C.S., in the 66th year of his age. Mr. Critchett commenced early in his career to devote especial attention to ophthalmology and enjoyed a wide reputation as a successful and skilful operator. He introduced several new methods into practice, and was the author of numerous valuable contributions to ophthalmological literature.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT, U. S. ARMY, FROM NOVEMBER 13 TO NOVEMBER 20, 1882.

MOORE, JOHN, *Surgeon.*—The leave of absence granted by S. O. 145, C. S. Department of Colorado, extended one month.—*S. O. 175, par. 2, Military Division of the Pacific, November* 3, 1882.

WILLIAMS, JOHN W., *Major and Surgeon.*—Assigned to duty at Fort Coeur d'Alêne, Idaho.—*S. O. 161, par. 3, Department of the Columbia, October* 26, 1882.

GARDNER, EDWIN F., *Captain and Assistant Surgeon.*—Ordered to Fort Walla Walla for duty.—*S. O. 161, par. 3, Department of the Columbia, October* 26, 1882.

REED, WALTER, *Captain and Assistant Surgeon.*—Relieved from duty in the Department of the East, and assigned to duty in the Department of the Platte.—*S. O. 266, par. 4, A. G. O. November* 14, 1882.

OWEN, WM. O., JR., *First Lieutenant and Assistant Surgeon.*—To proceed to Astoria, Oregon, and report to First Lieutenant E. B. Rheem, Twenty-first Infantry, for duty with his command.—*S. O. 164, par. 5, Department of the Columbia, October* 30, 1882.

WYETH, M. C., *First Lieutenant and Assistant Surgeon.*—To report to Fort Snelling, Minn., for temporary duty.—*S. O. 185, par. 3, Department of Dakota, November* 9, 1882.

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

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